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ORIGINAL ARTICLES.

FISTULOUS ESCAPE OF LIGATURES AFTER PELVIC OPERATIONS.

Read in the Section of Obstetrics and Diseases of Women at the Forty-first Annual Meeting of the American Medical Association, held in Nashville, Tenn., May, 1890.

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As the science of abdominal surgery advances, we feel it is not a report of successful operations alone that establishes a reputation, but the number of absolute cures makes the successful surgeon.

Since the days of Listerism, when Lister first laid down the rules for antisepsis, which in turn gave birth to the crowning aid to surgery, thorough asepsis, the rate of mortality has diminished in a remarkable manner.

The number of abdominal sections for various lesions increased, and with the number of recoveries the dread for such surgery was diminished. Those earnestly engaged in effecting lasting cures, soon began to see that it was not always recovery from an operation which meant a cure. The patient was not safely landed; fistulæ, secondary adhesions, painful stumps, or unfinished operations, marked the shoals upon which the hopes for an entire recovery might be wrecked; like the successful navigator, it becomes our duty to study these shoals in detail, and, if possible, place the danger signal conspicuously in our minds, in order to be able to avoid a second exposure to similar dangers.

The most successful operations reported, prove that aseptic, rapid work, with as few instruments and sponges as possible; a clean, good stump; light ligatures, applied closely to the uterus, cut ends, short, thorough irrigation avoid many of these complications. If much oozing from torn adhesions, or if pus is present, the drainage tube becomes a valuable aid, provided it is properly cared for (cleaned at intervals of twenty or thirty minutes with syringe, and removed as soon as the effusion becomes serous and less than a drachm).

Last, but not least, comes the importance of including the muscle and fascia in closing the abdomen. The fact that various gynecological societies have taken up the discussion of the behavior of ligatures after the removal of diseased uterine appendages induces me to place on record two cases, the first my own, the second, one who subsequently placed herself under my care three months after operation.

Knowing full well there must always be a cause for unexpected happenings, I was anxious to satisfy myself in these cases, and think I succeeded.

Case 1.—Operation in March, 1887. Right ovarian cyst; cyst walls friable, adhesions, ligature Chinese twisted silk, medium size, Staffordshire knot, drainage five days; recovery good. With the exception of an occasional pain in the region of the stump, patient was well and attended to her household duties. Fifteen months later, however, the patient brought the ligature, claiming to have discharged it from the urethra after much tenesmus at micturition; giving a history of much pain previous on right side over the bladder, and frequent desire to urinate. Examination showed slight tenderness of stump and a tendinous cord leading to bladder. After a few weeks all tenderness gone, patient well.

Case 2.—Operation in May, 1887, by Dr. R. S. Hunt. I was present at the operation; cyst of broad ligament on left side. Ligature braided silk, No. 9, Staffordshire knot, no drainage. Aside from several stitch abscesses, recovery good, patient up in four weeks. During latter part of August of same year, patient experienced great pain in scar, shooting down toward the right side. A small abscess formed in the scar, was lanced, washed, probed and found to extend down toward the stump. In about two weeks the ligature was expelled and in a short time all had healed.

Case 1 presents two factors, each of which may account for the discharge of the ligature: First, the friable condition of the cyst wall, part of which helped to make stump, the want of vitality of surrounding tissues, failing to encapsulate or absorb the ligature; second, the length of time the drainage tube was left *in situ*, owing to my inexperience regarding their use, this being my first drainage case. I left it in long enough to become an irritant and had some difficulty in healing the track (three weeks).

Case 2 was undoubtedly due to the size of the ligature, the tumor being small and the pedicle short in consequence, allowed the ligature to slip

over the button the moment shrinkage of the stump took place.

In connection with this subject, I have endeavored to collect as many cases as possible, with a brief history of each. It is only by concentrating our forces that we are able to win the battle, hence the study of cause and effect becomes most necessary.

Dr. Thomas Keith, in his little book on "Contributions to the Surgical Treatment of Tumors of the Abdomen," relates his experience with catgut ligatures, (on page 17) he says: "Twice I have had hæmorrhage happen in ovariotomy, and on both occasions catgut ligatures were used, in one some thick catgut ligatures had been used to a very thick omentum. Several of the knots came away through the wound, and after weeks of horrible suffering from cystitis, a thick knot of catgut, with the loop but little absorbed, was passed by the urethra."

Dr. Matthew D. Mann tells us in his report of 160 abdominal sections (*Buffalo Medical and Surgical Journal*, April, 1890), that the causes of fistulæ are either an abscess in the pelvis from some foreign substance, or the use of the drainage tube, and cites an experience in which a fistula resisted all attempts at healing for four years; he feels confident that it is due to a silk ligature. This induced him to try catgut, which proved more satisfactory — indeed, he feels so secure about its harmlessness, that he was comparatively at ease when he found a fistula and discharge of pus follow the use of the drainage tube, feeling sure there was no infected silk at the bottom of the sinus. Later, two knots of catgut came out of this sinus, after which it readily closed.

In a communication from Dr. H. A. Kelly he writes the following: "I have had a number of cases in which the ligatures have all been cast off through the abdominal walls, except one case of hydrosalpinx and ovarian tumor, in which the patient afterward had cellulitis. This suppurated and was drained through the vagina and the ligature discharged. It has frequently happened in cases of pyosalpinx, where long continued drainage was necessary. I have observed it very constantly in cases in which the pyosalpinx has already ruptured, or been on the point of rupturing into the bowel, these cases always requiring prolonged drainage.

"Ligatures of twisted silk, figure of eight doubled, were used. These have been cast off from two or three months to a year after operation. I never use heavy strands of gut, as there is considerable doubt as to our ability to disinfect them satisfactorily. In all cases there has been drainage for four or five days. I clean the tube at intervals not longer than twelve hours. No sort of antiseptic injections are ever used in any of my abdominal sections."

Dr. Kelly's remark regarding the use of heavy strands of catgut seems of importance. We are never sure of healthy membrane, hence, in spite of antiseptic precautions we may often use septic gut. Dr. Matthew D. Mann's statement that gut shrinks one-tenth its length when wet with water, requires some consideration in tying, since too much pressure may cause some necrosis of stump.

The causes of fistulæ can be summarized as follows: Adhesion to the bowel may, in being loosened, cause thinning and subsequent sloughing. Heavy ligatures on small stump. Ends of ligature left too long. Ligature not thoroughly aseptic. Part of stump consisting of unhealthy tissue. Prolonged use of the drainage tube may set up localized inflammation, resulting in abscess of stump, or surrounding tissue.

Drainage, however, seems too valuable an aid to discard lightly, for we may meet with just as serious difficulties in closing up the abdomen where there is danger of oozing, which may accumulate and decompose, giving rise to troublesome secondary symptoms.

Among the secondary adhesions most commonly found, may be mentioned omental and intestinal with the stump or abdominal incision as a focus. Such a case was reported by E. Sinclair Stevenson before the British Gynæcological Society, April 24, 1889, in which intestinal obstruction called for a second operation. The omentum was found twisted like a loose rope, dipping into the abdominal cavity, glued to coils of intestine, its extremity firmly attached to a coil deeply seated. The importance of careful inspection regarding torn surfaces of omentum or peritoneum, and obviating adhesions by stitch or removal, spreading out the omentum toward the left just before tying the abdominal sutures, becomes at once manifest.

Omentum caught in the holes of the drainage tube, is another unpleasant complication, but can be avoided by using the tubes of small calibre with small perforations, as advocated by Dr. Joseph Price.

Intestinal adhesions to stumps or open surfaces left from torn adhesions, are best overcome by free purgation and the avoidance of opium.

Painful stumps may be due to an uncovered ligature, to unhealthy tissue left in stump, or, as Dr. B. C. Hirsch has shown us, by too much ligature, added to an unfinished operation. This brings us to the last point of importance: Under this head I have had an unpleasant experience with two cases some years ago; and have profited by it. One case in particular, in which a pus tube was so tightly adherent to the uterus and pelvic walls that my courage failed me and, contenting myself with one side removal, I closed the abdomen, only to see my patient three months later with a sharp attack of septic peritonitis, and

TABLE OF CASES.

Operator.	Operation.	Ligature.	Drainage.	Remarks.	History of Fistulæ.
Dr. Ashton. Annals of Gynecology, April, 1890.	January, 1888, abscess of right ovary and tube.	. . . . .	Yes	Track of drainage tube did not close. In finding one ligature, after flushing out the abdomen; no drainage, yet a fistula resulted, necessitating a third operation in Feb., 1889, with complete closure; the following August, however, the fistula reopened and discharged a ligature.	October, 1888, a second section resulted
Dr. B. F. Baer. (Personal com.)	Ovariotomy.	Chinese twisted silk, figure of 8.	Two days, tube cleansed with syringe every half hour.	Intraligament'y adhesions to descending colon and small intestine.	Fæcal fistula caused by sloughing of bowel and drainage tube; ligature came away two weeks after operation.
Dr. J. M. Baldy. (Personal com.)	Extra-uterine pregnancy. Local peritonitis.	Twisted silk, figure of 8. .	8 to 12 days, tube cleansed with syringe every hour.	General adhesions; beginning gangrene of sac.	Fistula at site of drainage tube; ligature came away in 13 weeks; healed spontaneously.
Dr. H. Beates, Jr. (Personal com.) Dr. B. has had three cases from other operators, in whom "fishing out the ligature" resulted in a cure. Ligatured twisted silk No. 4 in one, smaller in the other two.	Salpingitis	Twisted silk No. 3, Staffordshire knot.	1 to 2 days, injections of bichloride 1–10000, cotton capillary dressing.	General adhesions	Fistula at site of drainage tube; ligature came away in 12 weeks; healed.
	Pyosalpinx	Same as above	Same as above	General adhesions; patient in bed five weeks.	Fistula; ligature came away in 11 weeks; healed.
	Pyosalpinx	Same as above	Same as above	General adhesions; patient in bed five weeks.	Ligature came away in 14 months.
	Ovariotomy. Multilocular cysts.	Same as above	Same as above	No complications.	Ligature expelled through abdominal fistula in 10 weeks.
Dr. Wm. Goodell reports to the Philadelphia Obstetrical Society, March 7, 1889, the following three cases.	Removal of intraligamentary cyst.	. . . . .	. . . . .	Compelled to reopen wound for bleeding, 5 days after a fistula resulted.	1½ years since operation; fistula still remains; the only annoyance to the patient is an escape of gas.
	Pelvic abscess.	. . . . .	Prolonged.	A counter-opening may yet be necessary per vaginam.	Fistula caused by the prolonged use of the drainage tube.
	Recurrent intraligamentary cyst lying in a large abscess cavity.	. . . . .	Yes	Fistula resulted from a previous operation in which a clamp had been used many years ago.	Fistula still present at time of report; was then trying to heal with iodine applications along the entire tract.
Dr. B. C. Hirst. (Personal com.) Two cases.	Pyosalpinx	Twisted silk, figure of 8. .	No.	Patient was easily managed, out of bed 3 weeks. Excessive hæmorrhage necessitated passing two strong ligatures at base of R. broad ligament.	Fistula of a year's standing; after discharge of ligature fistula healed.
	Removal of a former stump, one-fourth ovary and four ligatures.	. . . . .	. . . . .	The ligatures were not surrounded by lymph accessible to sight and touch; pain which had followed previous operation disappeared after removal.	
Dr. John B. Deaver. (Personal com.) Two cases.	Double pyosalpinx. . . .	Twisted silk, figure of 8. .	Yes	Many adhesions	Fistula at site of tube track; ligature expelled 4 weeks after operation.
	Ovariotomy for large multilocular purulent cyst.	. . . . .	Yes	Patient had been tapped a number of times, making dense adhesions.	Fistula in tube track; ligature expelled 6 weeks after operation.
Dr. Hannah T. Croasdale. (Personal com.)	Removal of a tube and ovary. Local peritonitis.	Cable twist No. 3, Staffordshire knot.	Eight hours.	Extensive adhesions prevented removal of appendages of other side.	Patient in bed from Jan. 2 to Feb. 9; ligature discharged Jan. 31; rapid improvement; wound healed Feb. 4.
Dr. Joseph Hoffman. One case from his own practice, the other under observation. (Pers'l com.)	Pyosalpinx	Chinese silk twist No. 3, figure of 8.	Tube cleansed with syr'ge at short intervals.	General intestinal adhesions. Local peritonitis.	Ligature discharged in about 3 months; patient remained in bed 6 weeks.
	Pyosalpinx	Same as above	Yes	General intestinal adhesions; general peritonitis; pus.	Ligature discharged in about 3 months; patient in bed 2 months.
Dr. H. A. Kelley. Reported in the British Gynecol. Soc. by T. B. Jessett, Oct. 23, 1889.	Left ovarian dermoid cyst.	Chinese silk.	. . . . .	Dr. Kelly reports that "in her convalescence she had a large hæmatocele, ante-uterine, which is slowly undergoing contraction."	Mr. T. B. Jessett finds, 5 mos. after operation, an abscess in the anterior wall of vagina; opens, drains, and finds a Chinese silk double ligature; negative history regarding rigors or high temp.
Dr. D. Longaker. (Personal com.)	Hydrosalpinx, puerperal. Local peritonitis.	Plaited silk, medium size, figure of 8.	36 hours.	Extensive adhesions; sinus following drainage track.	After a few months one ligature, at end of sixth month the second came away; fistula failed to heal for one year; was finally curetted and injected with nitrate of silver; healed.

Operator.	Operation.	Ligature.	Drainage.	Remarks.	History of Fistulæ.
Dr. Charles D. Pearose. (Personal com.)	. . . . .	Twisted silk No. 3, figure of 8.	. . . . .	. . . . .	Dr. P. has had two cases in which a sinus lasted several months, one due to syphilis, the other to tuberculosis. He has had a case of discharged ligatures in abdominal sections.
Dr. W. H. Parrish. Case 1. (Personal com.)	Double ovariotomy. . . .	Black silk, fig. of 8 of one side, shoemaker's knot the other.	No.	Both ovaries cancerous, one presenting a large tumor of about 20 lbs., the other the size of a large orange; general condition poor.	Fistula; two months later shoemaker's ligature discharged and fistula closed spontaneously.
Dr. W. H. Parrish. Case 2. (Personal com.)	Removal of appendages on both sides.	Rather large Chinese lig. ature, fig. of 8.	Yes.	Syphilitic colored woman, confirmed drunkard, unruly; walked across ward second day, pins in situ; fistulous opening in lower angle of wound.	Nine mos. after operation removed one ligature with hooked end of small probe; subsequently a counter-opening was made per vaginam, by another gentleman; no avail; later, laparotomy by a third resulted in death.
Dr. Charles M. Wilson. (Personal com.)	Ruptured ectopic gestation of six months.	Staffordshire knot. . . .	. . . . .	. . . . .	Six mos. later one of the ligatures ulcerated its way out through the abdominal cicatrix.
Dr. H. M. Weeks. (Personal com.)	Extra-uterine pregnancy. Nov., 1888.	Twisted silk No. 3, figure of 8.	Prolonged; tube cleansed by irrig'n with the long syringe; distilled water.	. . . . .	Ligatures came away 5 months after operation.
Dr. H. T. Hanks. Reports N. Y. Obstetrical Society, Jan. 7, 1890.	Ruptured extra-uterine pregnancy.	. . . . .	Yes. Irrigation twice daily.	The R. broad ligament through which the large fetal mass had ruptured was very friable, and the sac had a strong tendency to cut through.	Ten days after operation two ligatures were removed from the sinus; patient made a good recovery.

die five months after; her abdomen literally filled with multiple abscesses. The second unfinished case was of a similar nature, though not so far advanced; the adhesions again intimidated me; patient recovered promptly, in spite of hot July weather, was temporarily relieved. The following winter I was called in to treat a localized peritonitis on the side where I had left the pus tube. She recovered, but has since passed out of my hands. I have learned that to open an abdomen and leave pus there is productive of as much censure as to know of its presence and not attempt its removal; and have since endeavored to remove the cause of sepsis even though the ideal operation was out of the question, and the results have been more satisfactory.

This leads me to an important question which has agitated my mind of late, and which is best illustrated by a brief account of two cases from my practice, both unilateral hydrosalpinx. In both I removed the affected tube and ovary—one in March, 1887, the other in February, 1888; the remaining appendages apparently normal. Both recovered promptly and improved in health. Former symptoms returned to the other side—Case 1 in eighteen months; Case 2 in six months.

Case 1.—Reported three months ago. Found painful mass on right side; when told she made preparations at once for a second operation. Operation March, 1890. Some omental adhesions to incision, tube and ovary adherent, cystic, left stump was healthy. Patient recovered promptly, now seven weeks since operation; no pelvic pains, intestinal functions normal.

Case 2.—Operation May 9, 1890. Omental adhesions to abdominal wall. Intestinal adhesions to the stump, uterus and abdominal wall; ovary and tube adherent; decided constrictions of tube near ostium internum. Removed tube and cystic ovary; separated all adhesions except those to the stump, fearing more grave complications. May 18, patient doing well.

This leads to the question: Is it the proper course, to remove an apparently normal ovary and tube when there is hydrosalpinx on one side, or shall we let the patient run the risk of a possible second operation?

Is there the same danger as in pyosalpinx? Should this last question receive an affirmative answer, it certainly behooves us to explain such dangers fully to the patient and gain her consent to remove, if necessary, even an apparently healthy-looking ovary and tube; so she may not be exposed to the dangers of a second operation.

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IN China eight varieties of leprosy are recognized, and the disease is considered contagious, infectious and hereditary, but is said to disappear in four generations. There are leper villages, to which all suffering from the disease are sent.

FACIAL AND THORACIC DEFORMITIES INCIDENT TO OBSTRUCTION BY ADENOID HYPERTROPHY IN THE NASO-PHARYNX.

Read by Title in the Section of Practice of Medicine, Materia Medica and Physiology, at the Forty-first Annual Meeting of the American Medical Association, May, 1890.

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The disease which occasions the particular form of obstruction, prone to result in the series of deformities about to be described, is variously known as "adenoid hypertrophy in the naso-pharynx," "adenoid vegetations" and "hypertrophic naso-pharyngitis;" and in multiplicity of cases, gravity of consequences, facility of operative treatment, and the brilliancy of results, it may be said to outrank any other affection of the upper respiratory tract.

At the vault of the pharynx a number of muco-lymphoid follicles are grouped together forming a compound gland, analagous to the tonsils and known as the third tonsil, the pharyngeal tonsil or the tonsil of Luschka. In the normal state this is not of sufficient size to deserve such appellation, but when hypertrophied, as it frequently is, it bears some resemblance to the faucial tonsil in a state of enlargement.

In form, contour, and consistency the growth presents many gradations from the soft stalactitic "adenoid vegetations" up to the dense and more fibrous individuate variety, in which the mass is made up, in large part, of but a single neoplasm, of firmer consistence, smooth surface, and more or less irregular contour, according to size and degree of impaction. Fig. 1, accurately drawn

Figure 1.

from nature, is a typical representation of an average case in which the naso-pharynx is seen to be occupied by a fimbriated adenoid mass, which occludes, in large part, the posterior nasal choanæ, and so presses downward the upper lip of the tuber of the left Eustachian orifice as to practically close the channel to the middle ear.

Etiology.—The disease is frequent among children, not uncommon with adolescents, and not at all rare during early adult life. Children of inherited syphilitic or tuberculous diathesis, and those perhaps otherwise the victims of scrofulosis, are predisposed to it. It is unnecessary to discuss the relationship between these diatheses. Whether as a result of inheritance of one or more of them, or of acquisition through bad hygienic influences, we recognize in the state called scrofulosis a debilitated constitutional condition, one of the characteristics of which is a pronounced tendency toward hyperplasia of the lymphatic and lymphoid structures. The reason therefore one can not state any more than one can formulate a full explanation of the normal cell proliferation. It concerns that of which we know naught—the ultimate essence of life itself. Climatic inequalities furnish adequate exciting causes. Repeated acute congestion from "cold" acting upon a structure already the subject of diathetic predisposition to hyperplasia, serves to establish a chronic hypertrophy of the group of muco-lymphoid glands in the naso-pharynx. This mass is then constantly swathed in a viscid muco-purulent, readily decomposable secretion, the product of its own elaboration, which, by exciting and maintaining irritation, further conduces to the development of the growth.

Symptoms.—The space of the naso-pharynx is, by nature's law, designed to be free, and to serve as a common area of air communication between the five openings which enter it.

The Eustachian tubes open into it, one on each lateral wall posterior to the nasal choanæ, and upon perfect patency of these openings, together with free nasal respiration, the power of hearing is dependent, for ventilation with normal air pressure in the cavity of the middle ear, is essential to correct auditory sense. Deafness, therefore, is frequently a deplorable symptom, and one which is liable to become permanent unless speedy relief be afforded.

Into this space open also the posterior nares, the natural respiratory passage being *via* the nose and naso-pharynx. Adenoid hypertrophy therefore serves as a plug to the posterior nasal openings, and obstructs nasal respiration completely or in part according to the degree of glandular enlargement. From this point we find it a matter of exceeding interest to trace the origin and development of each successive step in the series of deformities consequent upon this condition. The plugging up of the posterior nares necessitates oral breathing, and the constantly open mouth interferes with the normal adaptation of certain facial muscles, which in turn effects radical changes in the contour of the soft and developing bones of the face, the whole resulting in a physiognomy characterized by a vacant, stupid, almost idiotic expression of countenance, which can be better illustrated by photographs from nature than described. (Fig. 2.)

The hanging lower jaw causes the face to appear elongated. The nose is pinched or its alæ

distended, while the angles of the mouth and eyes have a drawn appearance.

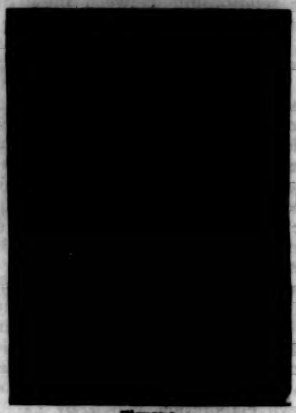

Figure 2.

Moreover, as pointed out by Henri Chatellier,[1] of Paris, cited by Hooper,[2] of Boston, the air cavities in communication with the nose, as the frontal, maxillary, sphenoidal, and ethmoidal sinuses, which are essential to the proper expansion of their respective bones, cease to develop when the circulation of air through the nose is interfered with, thus altering nature's intent regarding the dimensions of the face and head, and still further deforming the physiognomy. Dr. Hooper has also described and illustrated the next link in the chain of deformities—the high-arched hard palate and V-shaped indenture. The naturally rounded arch of the roof of the mouth is formed, in large part, by the palate process of the superior maxillary bone, which also constitutes a corresponding portion of the floor of the nose. Augmentation of atmospheric pressure upon the buccal surface of the palate process and the impact of air currents to and fro during mouth-breathing, together with diminution of intra-nasal air pressure incident to nasal obstruction, gradually force upward the centre of the hard palate, and change thus the obtusely rounded Romanesque arch into one of Gothic shape—the pointed or high-arched palate invariably existing in association with long continued and excessive adenoid development during childhood. (Fig. 3.)

Elevation of the palatal arch lessens the transverse diameter of the jaw and causes it to grow pointed in front—the so-called V-shaped indenture—and with the resulting contraction of the alveolar process, the teeth, especially those near the point, are crowded into various grotesque aggregations, or are rotated on their axes—a condition depicted in Fig. 5, drawn from a typical case, in which the two central incisors overlap, and the two lateral incisors undergo a quarter rotation and stand at right angles to the alveolar process.

Dentists have long recognized what they call the "habit" of mouth-breathing as a prolific source of irregular indentures, and S. C. G. Watkins, in a recent number of the *Ohio Journal of Dental Science*, says: "I know a child which at birth and up to the third year had a perfectly formed and normal arch; but it acquired the habit of breathing through the mouth, and the arch is becoming narrow—so much so that you cannot do more than place your finger in the centre of the arch. Now, at the age of 9 years, there has been a radical change in the shape of the mouth, and from no other reason than oral breathing."[3]

Figure 3.

We would advance a step and assert that mouth-breathing is but rarely a mere "habit." It conduces to so much discomfort that even the babe would feel inclined to close this aperture could he secure the requisite amount of air through the nose and naso-pharynx. Aside from greatly debilitated states, it is occlusion to some degree of these passages which necessitates the habit.

Next, elevation of the palatal arch must produce contortion within the nose. Deflections of the septum are rarely congenital; indeed, the only part of the septum which is ossified at this period is the vomer, the whole ethmoid bone, including the vertical plate, being in a soft cartilag-

[1] Des Tumeurs Adenoides du Pharynx, Paris, 1886.

[2] "The Mechanical Effects of Adenoid Vegetations in Children." Reprint from Medical and Surgical Report of the City Hospital of Boston, Fourth Series, 1889.

[3] It is proper to state that other dental authorities deny this influence of oral breathing in the causation of deformed indenture, and attribute the latter solely to a perverted formation of the permanent set of teeth. The association, however, between adenoid vegetations and the high-arched palate is so constant that an etiological relationship must exist.

inous state. Traumatism, as shown by Robertson in the investigation of 217 cases, cited by Delavan,[4] cannot fairly be made to account for much over half the number. Now, the septum, composed of the vomer, the perpendicular plate of the ethmoid bone and its cartilaginous portion, is unequal in power of resisting compression to the bones by which it is incased. Designed by nature to fill vertically the natural space between the roof of the nose and its floor, the abbreviation of this space by elevation of the palatal arch through the instrumentality of naso-pharyngeal adenoid hypertrophy cannot result otherwise than in forcing the septum to provide for itself by bending and curving laterally in various directions—a condition which is diagrammatically represented in Fig. 4, and which explains the etiology of the remaining moiety of cases of deviation of the septum narium. Furthermore, guided by the contorted septum, even the external nose may be twisted to one side—a deformity common enough in its milder aspects, and not unfrequently seen in aggravated forms. Within the nares also the septal deflection acts as an additional impediment to nasal respiration and drainage, and becomes a potent factor in the evolution of hypertrophic rhinitis, or that form of nasal catarrh characterized by enlargement of the turbinated bodies. (Fig. 5.)

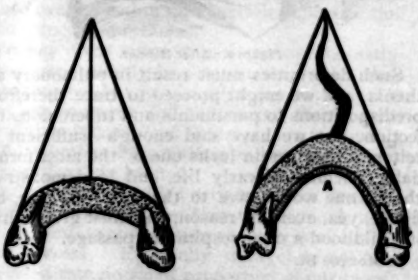

Figure 4.

Finally, not only, as before said, do these unfortunates *look* stupid, but they really *are* stupid and exhibit abundant evidence of mental hebetude, with inability to fix the attention to learn, to memorize, or to reason, the whole evidencing an impairment of cerebral function which Dr. Guye,[5] of Amsterdam, has recently described under the name of *aprosexia nasales*. Indeed, we hold it not illogical to believe that in extreme cases of long duration, associated perhaps with deafness, such alteration of cerebral function might ensue as to result in absolute idiocy.

Three varieties of thoracic deformity are observed to accompany obstructive naso-pharyngeal adenoid hypertrophy, the association of one or other form, in advanced cases, being so constant that a direct causal relationship, although difficult of absolute demonstration, can reasonably be assumed.

For the induction, however, of two of these forms, the "pigeon-breast" deformity and the "barrel-shaped chest," the intermediation of still another symptom—bronchitis, seems essential.

The influence of hypertrophic rhinitis and obstructive deflection of the septum narium in the causation of certain cases of bronchitis is now a matter of common observation. Plethora of the blood-vessels of the nasal mucous membrane tends to develop a like plethora in the bronchial mucous membrane, and anæmia induced in the turbinated tissues tends to effect an anæmic state of the bronchial tubes. The physiological relationship between the two regions—the nasal erectile tissues being designed to warm and moisten the inspired air—demands, through the vaso-motor system, an intimate correspondence between their blood supplies. As might therefore be expected, a pathological correspondence also obtains, and without entering into a discussion of the hypothetical details of nervous mechanisms, we simply state the oft-observed fact, that turgescence and vaso-motor paresis of the nasal erectile tissues may occasion vaso-dilation, congestion, and inflammation of the bronchial mucous membrane.

Figure 5.

Now, we have just seen how adenoid vegetations, persisting through early childhood, can occasion obstructive deflection of the septum with hypertrophic rhinitis, and, in many instances, chronic bronchitis is thereupon superinduced.

Furthermore, adenoid hypertrophy is, in itself, an etiological factor in the production of chronic bronchitis. Especially in neurasthenic individuals, it is exquisitely sensitive to reflex producing impressions, and its irritation may result, reflexly, in spasm of the glottis, cough, asthma, and paretic vaso-motor bronchitis.

Miss A., for instance, was affected by large adenoid vegetations, and suffered also with profuse bronchitis and from alarming, rapidly recurrent attacks of spasm of the glottis. On two occasions we were able to excite the glottic spasm

[4] Reference Handbook of the Medical Sciences, Vol. v, p. 213.
[5] "On Aprosexia," by Dr. Guye, Professor of Otology in the University of Amsterdam. Journal of Laryngology and Rhinology, December, 1889.

in our office by simply titillating the adenoid mass by a probe. They culminated with extreme suddenness and endured for a couple of minutes, the second paroxysm being so severe as to suggest hasty preparations for tracheotomy and to cause us to desist from further experimentation in this direction. Surgical removal of the adenoid growth, somewhat incomplete for want of time, resulted in a disappearance of the bronchitic symptoms, and in such amelioration of the glottic spasms that they ceased to be a serious inconvenience.

Again, for example, in the case of a young boy who suffered from chronic bronchitis with frequent asthmatic paroxysms, the removal of an associated adenoid mass from the naso-pharynx resulted in an immediate disappearance of all symptoms for a period of five months, but with subsequent rarer and milder recurrences. Indeed, in all cases of chronic bronchitis with children, adenoid hypertrophy should be sought for, as the upper and lower respiratory tracts constitute one continuous surface, having intimate nervous and vaso-motor connections, and the removal of adenoid vegetations, if present, will eliminate at least one, and possibly the chief, source of irritation.

With the continuance of bronchitis during the early developing years, the irregular convulsive action of the respiratory muscles incident to cough and dyspnœa is productive of the thoracic deformity known as "pigeon-breast," in which the sternum protrudes, the antero-posterior diameter being lengthened at the expense of the transverse diameter. The same symptom is influential also in the production of the emphysematous or "barrel-shaped" chest, as the coughing spells and powerful expiratory efforts, by forcing the air to the superior part of the lungs, serve to distend the antero-posterior diameter of the chest at this point.

The culmination, under like conditions, of one or other of these two deformities, is seemingly determined, with some by age—young subjects being little prone to emphysema and the deformity tending toward "pigeon-breast;" and with others, by the existence primarily of any degenerative change in the alveolar walls which might predispose to emphysema and in consequence to the "barrel-shaped" deformity.

The third variety of thoracic deformity—the "flat chest," is due directly to obstruction by the adenoid growth itself, and is an indrawing of the chest walls, especially a shortening of the antero-posterior diameter which results from an insufficient air supply to the lungs. The impairment of the normal respiratory relations by exclusively oral breathing, is such that complete expansion of the chest does not occur and a sufficient amount of air cannot be obtained, a fact which any one can test for himself by comparing the ease of deep inspiration through the nose with the laboriousness and incompleteness of similar efforts continued through the mouth alone.

The chest in these cases becomes flat and thin (Fig. 6, after Hooper), has a sunken appearance over the lower part of the sternum, perhaps a deep concavity at the ensiform cartilage with depressed intercostal spaces—a permanent, mild degree of the retraction observed during the dyspnœa of membranous croup, and due, as Löwenberg,[6] cited by Hooper,[7] has explained, to excess of atmospheric pressure on the outside of the chest, together with the labored action of the diaphragm and intercostal muscles in efforts at inspiration.

Figure 6. After Hooper.

Such deformities must result in pulmonary asthenia, and we might proceed to trace therefrom predispositions to pneumonia and tuberculous infection, but we have said enough—sufficient to reiterate that herein lurks one of the most formidable enemies of early life, and to demonstrate that if one would save to the adult his face, his figure, yea, even his reason, one must give to him in childhood a clear respiratory passage.

70 Monroe St.

A SIMPLE AND RELIABLE ASTIGMOMETER.

Read in the Section of Ophthalmology at the Forty-first Annual Meeting of the American Medical Association, held at Nashville, Tenn., May, 1890.

BY F. C. HOTZ, M.D.,

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It is an old saying that "haste makes waste;" and every medical man will do well to have these three words inscribed in golden letters over his desk; for three-fourths of all the mistakes made in medical practice can be traced to hasty examination. But while we should spare no time in

[6] Tumeurs Adenoides du Pharynx nasal, Paris, 1879.

[7] The Mechanical Effects of Adenoid Vegetations in Children. Reprint from the Medical and Surgical Reports of the City Hospital of Boston, 1889.

order to obtain a correct diagnosis, we do not like, on the other hand, to waste any time unnecessarily in the busy hours of the consulting room. While our examination should never be hurried, it often can be quick or slow, short or long, the time consumed being dependent a great deal on the method we employ; the one method may give us the desired information in five minutes, which we cannot get by another method in less than fifteen minutes.

In this respect the examination for astigmatism furnishes us a good illustration, and if we make quickness and precision the essential conditions for the best practical test for astigmatism, the methods at our disposal show a great difference in their practical utility.

When we examine for astigmatism we wish to find out first, of course, whether the eye is astigmatic; and if it is, we want to know the exact position of the two principal meridians. If this point is established with precision it is an easy task to ascertain the refraction of either meridian, and thereby the degree of astigmatism, and to select the proper glasses.

Now, we can diagnosticate astigmatism by the direct ophthalmoscopic examination, but you will admit this is not a quick and easy way. Much quicker and easier is the shadow test; but neither method can determine with precision the direction of the principal meridians.

We may often succeed in detecting the astigmatism very quickly by rotating a cylinder glass before the eye, but just as often our patient's answers are so vague and misleading that a great deal of time is consumed before we are reasonably certain whether astigmatism exists, and where the meridians are located.

And as to the so-called astigmatic fan, or clock, and all its modifications, this test demands a degree of accurate observation the fewest of our patients possess. Especially with children (and they constitute no small proportion of our cases), this test is very tedious and unsatisfactory; but even grown persons seldom are quick in observing any marked difference in the lines unless their astigmatism is of a high degree. I have often tested patients upon this point after their astigmatism had been established by other means; and the most of them could not see any difference in the lines until I pointed out those lines which, according to their astigmatism, had to be the most distinct, and told them to compare them with those lines which had to be the least distinct; then, and not until then, they began to appreciate the difference. But in the examination, of course, it would never do to lead the patient in this way, because if you ask them whether they do not see certain lines more distinctly than others, nine out of ten will imagine to observe a difference which they do not see, and make you diagnosticate an astigmatism which does not exist.

Dr. Culbertson's prisoptometer is a very ingenious instrument to detect anomalous refraction; but it, too, puts a greater demand upon the observing power than a great many patients can meet. I, at least, have found that it is impossible for many patients to appreciate slight variations in the contact of the two discs so that they could tell with precision whether the contact remains exactly the same during the rotation, or at which angle of rotation it is disturbed the least, and at which the most.

It would be tiresome to review all the methods and costly instruments which have been devised for the examination of astigmatism; they are no better than those I have mentioned. These, I believe, are the most popular methods, and I have shown that none of them fulfils our conditions of quickness and precision in establishing the presence of astigmatism and the direction of the principal meridians; especially for the lower grades of astigmatism they are not very reliable.

Now, it has always seemed so strange to me that we should waste our time with these elaborate methods, when we have a much simpler and more sensitive test, which will tell us quickly whether an eye is astigmatic, and at the same time also give us the correct position of the faulty meridians. This test is the retinal image of a distant point of light.

Since the rays coming from such a point which pass through the meridian of greatest refraction are focussed sooner than the rays which pass through the meridian of least refraction, the image upon the retina can never be a sharply defined luminous point. If the retina is at or near the anterior focal line, the image will be elongated in the direction of the meridian of least refraction, and if the retina is at or near the posterior focal line, the image is drawn out in the direction corresponding with the meridian of greatest refraction. Whenever, therefore, a patient sees a distant point of light elongated we know he is astigmatic, and the line of elongation gives us at once the direction of the one, and indirectly also that of the other, meridian, because they are always at a right angle to each other. And as it does not require a keen power of observation to tell the approximate shape of a small hole, this test is as quick as it is sensitive and precise; for it is very easy even for a child to determine whether the light looks round (like a pea or marble), or oblong (like an egg, an almond, or half moon), or whether it has no definite form (like a star).

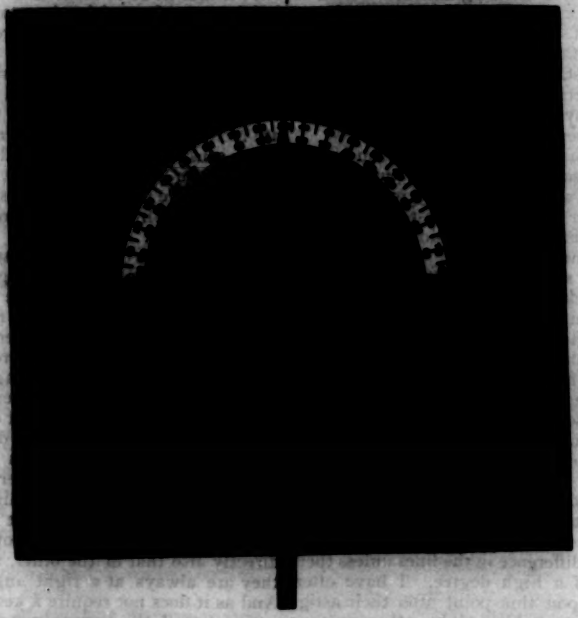
Theoretically this distant point of light should appear elongated to every astigmatic eye, with the exception of such cases of mixed astigmatism where the myopia of the one meridian is about of the same degree as the hypermetropia of the other principal meridian; for, under these circumstances, the retina being about in the centre of

the focal interval, receives a round, though indistinct, dispersion image.

In persons over 40 or 45 years of age you will find the results of the test agree with the theory. But among younger persons with active accommodation you will find a great many who, though astigmatic, see the hole perfectly round, because their astigmatism is corrected by the unequal contraction of the ciliary muscle. I have found, however, that if such patients look steadily at the light hole they notice its form is constantly changing from round to oval, and back to round again. This observation shows how sensitive this test is, and at the same time furnishes us an interesting evidence of the unequal contraction of the ciliary muscle.

(+ or — as the case may be) which corrects the ametropia of one meridian and thus reduces the compound to simple astigmatism will produce a better defined image and reveal at once the elongation of the light point. And in the same way we can reduce mixed astigmatism to the simple kind, and obtain the distinct oval image by our test. Sometimes a patient will see the light hole double instead of oblong; and in this case, one hole above the other, or to the side of the other, indicates the meridian just as well as the vertical or horizontal elongation does.

I began using this test in 1872, when I had a little instrument made for this purpose, which, in want of a better name, I baptized "astigmometer," although I employ it more for *detecting* than for



But, fortunately, we have in the mydriatics the effectual means of eliminating the disturbing influence of the ciliary muscle; and I never consider the examination for astigmatism in a young patient completed unless the accommodation has been suspended. When this is done, the light hole will always appear elongated in simple astigmatism, and in all cases of compound astigmatism, provided the retraction of one of the meridians does not depart from emmetropia by more than one-half or one dioptry. With higher degrees of ametropia in both meridians the retinal image is so blurred that the patient cannot make out any definite shape; but the proper spherical glass

measuring astigmatism; but you can measure its degree with it just as well.

Description of the Astigmometer.[1]—The instrument which I take pleasure in showing you now consists of a blackened metal screen 20 cm. (8 inches) square; in its centre it has a round aperture (B); and the semicircle of a protractor is fastened to it so that the 90 degree mark is exactly perpendicular over the round hole and the 180 degree mark exactly on a horizontal line with it. Between the protractor and the central hole a semicircular slot 10 millimeters wide is cut into the screen, but is covered in front by a round

[1] For sale by Sharp & Smith, 73 Randolph street, Chicago.

metal disc which can be rotated round the central opening, and which has near its periphery a round hole (A), so arranged that it travels exactly along the slot when the disc is rotated. Just over this second hole (A) the edge of the disc is drawn out to an arrow-like point which reaches the concave margin of the protractor. This point and the centres of the two holes are exactly in a straight line, and therefore the angular degree of the protractor to which the arrow points, will always show the radius in which the movable hole (A) is situated. Both holes are exactly the same size; on the front side they have a diameter of 4 millimeters, but on the other side they are much larger. This was done to make sure that no shadows could interfere with our observations; for the metal around the holes (especially around the central one) is so thick that if they had the same size on the posterior as on the anterior face the posterior edge might cast a shadow when the hole is illuminated from behind, and this shadow might make the hole appear to the spectator in a different than its true form, though he be not astigmatic. Finally, in order to avoid any glaring light and to make the outlines sharp and distinct, the holes are filled with small bits of ground glass so that they light up with a uniform mellow light. Diametrically opposite the arrow there is a small knob, by which the disc can be conveniently rotated, if necessary.

How to use the Astigmometer.—The instrument may be set in a window shutter or placed in front of a gas or lamp light. My instrument is set into a movable bracket which is fastened to the wall near the gas light. When not in use it is turned to the wall and thus it is out of the way; when I wish to use it I swing the bracket so that the screen stands exactly perpendicularly and about six or eight inches in front of the gas light, which stands just a little higher than the central hole. The screen is so high from the floor that the holes are about on a level with the eyes of the patient sitting (if an adult) or standing (if a child) 15 feet away. Especial care must be taken that the plane of the screen is exactly at right angle to the visual line of the patient. The room is then darkened, the gas light turned on just enough to light up the holes, and the patient is directed to look at them, with one eye at the time, and to tell whether he sees them distinctly enough to make out their form. Never ask a leading question like this: "Do you see these round holes?" because the *suggestion* of the round form implied in the question, will make the patient see the holes round, even though they actually appear to him oblong. Let the patient describe what he sees, and you will easily and quickly find out whether the holes appear indistinct, or round or oblong.

The great advantage of this instrument is that as soon as, with or without spherical glasses, the holes appear drawn out, we do not only know the eye is astigmatic, but we also know, and at once, the exact direction of the faulty meridians. If the patient declares the elongation is straight up or straight across we know of course the two meridians are vertical and horizontal. But if the elongation occurs in an oblique direction the patient can seldom estimate accurately the angle of inclination; and just here this apparatus is of the greatest value, for it will determine the inclination quickly and precisely. While the patient is looking at the holes we have only to turn the round disc to the right or left until the peripheric hole (A) is moved to a point where its long axis (as seen by the patient) makes one straight line with the long axis of the stationary central hole. The degree to which the arrow then points gives the exact angle or inclination of the meridian. For instance, if the patient sees the holes drawn out obliquely up to the right, I must move the peripheric hole, if it stands at 90 degrees, down to the right to bring it into the line of inclination. Before doing this, I explain to the patient, by means of two pencils, what I wish to accomplish and what I mean by "bringing the two ovals into the same line;" when he understands it and I begin rotating the disc he is to tell me to stop when the holes are in line. This done, I look at the indicator, it points to 45 degrees, and I know at once the one meridian is inclined 45 degrees, and the other, of course, 135 degrees.

Dr. G. M. Burnett, who, as far as I know, is the first author since Donders, giving a description of this test, says:[1] "But while this gives us the direction of the principal meridians, it furnishes no information as to the form of the astigmatism, the light spot being drawn out in the same direction in M. and H." This is true, but if you wish to get this information, you can quickly have it by a few trials with spherical glasses. Suppose, for instance, the light holes appear elongated vertically and a + 1D. makes them still longer, but at the same time broader and less distinct, while a — 1D. reverses the elongation and draws the holes out horizontally, you know at once there is myopic astigmatism in the vertical meridian; and if you like, you can determine even the exact degree of the M. by that glass which changes the light spot to a horizontal line.

Whether you like to determine separately first the refraction of the meridians by this test, and then to find out the visual acuteness by means of glasses and the test-types, or whether you prefer to ascertain the refraction and vision in each meridian at one and the same time with the aid of the stenopaic slit;—this is perhaps a matter of personal choice. I, for my part, use the stenopaic

[1] Treatise on Astigmatism, p. 76.

slit and test-types as soon as the astigmometer has furnished the direction of the meridians; for in this way I can find out the quickest which glasses will give the patient the best possible eyesight, and this is, after all, the practical and final problem our examination for astigmatism has to solve, and which it can solve only by means of the test-types and lenses. All the other methods are useful only in preparing the way for this final test. And among these preliminary tests I regard the distant point of light as the most useful one. It is probably the oldest test for astigmatism; for Prof. Donders, as we all know, has used it extensively in his classical investigations on astigmatism. In 1873 Dr. W. L. Purves spoke of its merits in Graefe's Archiv (xix) and described an instrument very similar to the one which I had made for my own use a year previously. But as I have not seen it used by any one else, and having tested its reliability and practical value these 18 years, I cannot longer resist the desire to see it more generally employed; and I feel convinced you will find it, as I did, a most useful addition to your office outfit and a time-saving instrument in your practical work.

103 State street.

RHEUMATISM, AND ITS TREATMENT BY TURKISH BATHS.

Read in the Section of Practice of Medicine, Materia Medica and Physiology at the Forty-first Annual Meeting of the American Medical Association, at Nashville, Tenn., May, 1890.

BY CHAS. H. SHEPARD, M.D.,
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At what time the disease called rheumatism first made its appearance is not known. The name was first applied in 1642, in a treatise on the subject by one of the most celebrated physicians of his time, M. Guillaume de Baillou, who was an author of several medical works of great merit.

No disease has proved more perplexing. Its uncertain course at times seems to baffle the physician at every point. Volumes have been written concerning its character, and other volumes still have been devoted to the various systems of treatment, which from time to time have held the favor of the medical world. Nor is the subject exhausted. While much is unsatisfactory, and many new facts are continually discovered, opportunity yet remains for the investigator to discover more. Every new thought advances the welfare of mankind. It is the purpose of this paper to suggest some conclusions on the treatment of this disease which a somewhat extensive study, together with a practice of nearly thirty years' duration, have developed.

Rheumatism exists in three forms: the acute, the sub-acute, and the chronic. The prominent symptoms are well known. One most characteristic of acute rheumatism is inflammation, attended with intense pain in and around the joints, and with marked febrile and nervous conditions that indicate a disturbance of the nerve centres. Another noted symptom is the presence in the blood of an excess of lactic acid, which has a decidedly stimulant action on the cutaneous surface. Subacute rheumatism is a milder form of the same disease. Chronic rheumatism is a name which is loosely applied to many ailments not really of rheumatic origin. Properly speaking, it is a milder form of the subacute variety.

The pathology of rheumatism is acknowledged to be obscure, and consequently there is great diversity of opinion regarding its essential nature. These different conditions are the expression of but one morbid process with varying forms of intensity. At one time rheumatism was regarded as a general or infectious disease; at another, as a fever; and again, merely as a peculiar inflammation of the joints and other structures. Of theories now in vogue, perhaps the most prominent one is that lactic acid accumulates in the body, and that the symptoms are directly traceable to the action of this poison upon the system. There is the nervous theory, the germ theory, and also the malarial theory.

Rheumatism is a constitutional disease, evolved in the system, the culmination of excretory products. The freedom from rheumatic symptoms immediately following a single attack strongly indicates the expulsion of noxious matter from the system. As man is but the product of his environments, no valid claim can be made that any one cause is sufficient to account for all the disorder that this disease produces. It would be nearer the truth to call rheumatism the sum of all the transgressions of its victim. Lactic acid is a normal product of tissue metamorphosis. The morbid action which constitutes rheumatism gives rise to an excess of the acid, and this excess and the rheumatic symptoms both result from the same cause.

It is reasonable to suppose that the special poison of rheumatism may find its principal obstruction while circulating through the tense fibrous tissue of the joints, and thus by pressure on the nerves of those parts produce the pain characteristic of the disease. Retained excreta exercise two distinct actions: one, a stimulant action on the organ by which they are naturally eliminated; the other, a disturbing action on the tissues which supply the materials of their formation, and there is always danger from every arrest of the nutritive changes of the system.

Of the predisposing causes of rheumatism, one of the most importance is inheritance, which can be traced in 27 per cent. of all cases. Some bring it on by overwork or exposure in damp or unsanitary surroundings. All nerve exhaustion tends to lower the vital reaction of the individual, so

that a slight occasion often culminates in this disease; but in most cases the attack is induced by error or excess of alimentation. Indigestion is a frequent cause of rheumatism in the aged, and there is no doubt that tobacco and alcohol are responsible for a large amount of this as well as other disease. The action of tobacco on the nervous system, which is mistakenly supposed to be a tonic, is in reality only a toxic effect, and alcohol, by preventing the elimination of waste material, helps to aggravate every weakness and increase every predisposition to disease. Those alcoholic drinks that contain lime salts are particularly injurious to rheumatics.

Rheumatic fever is simply a crisis, in other words, a means of expelling morbid material from the system, and instead of trying to suppress it, we should aid nature in all her efforts to eliminate this poison. Disease, in whatever form it may appear, is but an effort of nature to free itself from some offending material in the system.

There is probably no disease to which so many different modes of treatment have been applied. Until about the middle of this century, bleeding was considered the sheet anchor in the treatment of acute rheumatism. Facts, however, tended to show that patients recovered more rapidly and satisfactorily when they were not bled, and the practice generally was abandoned, for rheumatism as well as other diseases. Purgatives, diaphoretics, sedatives, and many other remedies have had their day. Then came the lactic acid theory, which naturally led to the alkaline treatment. Lemon juice also found favor for a time, with results quite as good as those from the alkalies. Of all these remedies, not one can be confidently relied upon. Indeed, it has been stated by good authority, that we have no remedy for acute rheumatism. Even the salycilates, salol, colchicum, iodide of potassium, etc., have proved a disappointment in many cases.

So unsatisfactory did all known remedies prove, that about thirty years ago some physicians gave up all treatment, simply kept the patient warm in bed, ordered a light simple diet, and administered a placebo. Dr. Flint published, in 1863, an account of thirteen cases treated on this plan, with good results. Two years later Dr. Sutton, of Guy's Hospital, gave an equally good report of forty-one cases which were treated medicinally with mint-water only. This expectant treatment was adopted by many with results as satisfactory as those from more active measures.

For the treatment of a constitutional disease, we must needs have a constitutional remedy, and this is furnished us in the modern Turkish bath. Having devoted over thirty years to the study of preventive medicine, and having been during that time in an institution in daily contact with rheumatism, our opportunities have been exceptional. Of over three thousand cases of this disease under treatment, at least 95 per cent. have been either entirely relieved or greatly helped. Some, who were treated over twenty years ago, have stated that they have not had a twinge of rheumatism since. Under this treatment swollen joints have resumed their normal size, acute pains have been eradicated, and the patient restored to general good health. Men are to-day actively engaged in business who were brought to us by their physicians, who acknowledged that ordinary medication had failed to reach their case. The records of every establishment using this remedy will bear out the statement that no rheumatic can submit to the process without deriving great benefit, and that remarkably few have persevered in its use without experiencing permanent relief.

It therefore needs no apology for bringing to the notice of the profession a remedy that has been almost invariably successful, and that is, *heat;* the simplest, the easiest, and the most effective of remedial agencies. It is an all-important fact, that we have perfect command over the blood circulation by subjecting the skin organism to the influence of artificial heat, and on this the whole sanative virtues of the bath depend.

This opens a new field, and offers results that are well worth investigation and trial. Every physician should know what a Turkish bath is, and acquaint himself with its practical workings. It is no new-fashioned remedy of to-day. Its history dates back to tradition. We read of it in the early records of the Romans. In the Augustan period, the bath flourished in its greatest magnificence. All the resources of science and art were made contributory to its completeness. When Rome overran Gaul and Britain, the bath attended her progress, and ruins of the splendid structures then erected are now to be seen in many places, notably at the Hotel Cluny in Paris, and at the city of Bath, in England. The success of the Roman armies was due in a large measure to the bath, which was to them the hospital and the pharmacopœia. Traces of this bath are also found in ancient Mexico, in Ireland, and in many other countries.

For its modern revival we are indebted to David Urquhart, of honorable memory. He was an enthusiastic Englishman, who had represented his country in Turkey, and there became enamored with the bath as an institution. One chapter of a book which he wrote, entitled the "Pillars of Hercules," and which was published just forty years ago, was devoted to the Turkish bath, and first called attention to the subject.

The Turkish bath of to-day is a most desirable resort, where all modern improvements have been brought into subjection for the comfort and enjoyment of the bather. Treatment by the Turkish bath immediately becomes a luxurious method of getting well. It is a sweating process, and

heat is its vital principle. This can be used as high as 200° Fahr., and over, in cases of emergency. It would be impossible for bacteria, or disease-germs of any kind, to live in such a temperature, and it can be readily seen that with the circulation constantly coming under the influence of such an action it would soon be purified and vivified. By this bath we can destroy personal contagion. This has been demonstrated in many cases.

A few moments in the hot room brings a positive degree of comfort to the rheumatic patient, and soon so much relief is given by the heat, that he will almost imagine that the disease has left him. Every pore of the skin is made an open sluiceway for the discharge of a large amount of perspiration, disease-germs included. The good effect of the manipulation which immediately follows is intensified by this heated condition of the body. Certainly nothing can purify the external and internal man more than this process, nor can any agency better assist the vital energies in the struggle against disease. The circulation is invited to do its perfect work, and as the improved action of any organ only comes through a quickened circulation of the blood in that part, so we find that every function, influenced by this natural stimulus, quickly takes on a normal condition. When the body is thoroughly heated, and the circulation most active, the reaction from a cold application is most agreeable and salutary. Inflammation necessarily implies a want of proper circulation. Some cause has plugged up the finer terminal vessels of the part inflamed. A condition of stasis has been brought about. By applying heat, we relax the tissues so that the circulation can pass on, and the offending material be thrown out through the usual excretory channels. Whether or not this theory be true, the fact remains that thousands have experienced entire relief by this process.

In ordinary treatment it is observed that while the rheumatic patient may complain of the unpleasant effect of the perspirations, he never complains of their weakening effect, such as is observed in hectic fever. On the contrary, he may describe them as bringing great relief to the bodily condition.

The perspiration and increased circulation brought about by the heat are not at all exhausting or debilitating, for there is no drain on the vitality, and there is an essential difference in this respect from the perspiration brought about by exercise.

That this bath is weakening or in any manner debilitating, is thoroughly controverted by many facts, among others that the shampooers, who work in the heat several hours daily, never lose a day from its effects. On the contrary, they are examples of good health and vigor. Invalids, weakened by disease, and not able to sit up all day, have been subjected to this treatment once, and even twice, daily, for months at a time, the result being a constant improvement in health, strength and flesh. In fact, the more desperate the case, the more active and persistent the bath treatment. Many trades find it necessary for their workmen to labor in a temperature considably above 100° Fahr., and the men are far from being injured thereby. Prof. Carpenter, in "Human Physiology," endorses this same idea, and Chabert, the "Fire King," was in the habit of entering an oven whose temperature was from 400° to 600° Fahr. In fact, the whole weight of testimony disproves the notion that this bath is in any way enervating.

For those disposed to rheumatism, a careful and well selected dietary should be chosen. Sufficient only should be eaten, and that thoroughly masticated; the food being plain and simple. By a thorough *régime* of this kind, and a systematic course of treatment by the Turkish bath, all may be freed from any liability to this most uncomfortable disease.

Much has been and can be done by the private practitioner in the way of expectant treatment, or the let-alone policy, by preventing the patient from injurious dosing or troublesome friends, and mainly by making him comfortable and simply assisting nature to throw off the disease as fast as possible. The cold bath has a wonderful tonic effect, but the greatest relief is brought about by the sweating bath followed by the cold dash. The change from hot to cold has an invigorating effect upon the nervous system, and this is in line with the Turkish bath treatment. A little ingenuity will often enable the physician to improvise what will answer the purpose for the time being, in the patient's home. Wet compresses to the inflamed joints sometimes give great comfort. It is plainly impossible, however, in private practice, to have all the facilities to handle this disease as comfortably, or to relieve as quickly, as in an institution where all these arrangements are made a specialty. Therefore, when it is practicable, it is advisable to at once remove the patient to an institution where the Turkish bath and its accessories can be secured. The advantages of medical care, proper diet, and the regulation of the treatment to the condition of the patient by one who has had experience in the matter, are desirable.

Out of the multitude of rheumatic patients that have come under our care it would be unnecessary, and not to the purpose, to give the history of even a tithe of them. We have, however, selected six typical cases, simply to illustrate the treatment.

Case 76.—H. W. W., aged 44, was brought to the institution January 29, 1867, helpless from acute rheumatism, having been under regular treatment over six weeks. He was unable to move a joint in his body without much suffering,

and was obliged to have an attendant sit up to help him turn over during the night. He was given one treatment daily, and for one week was carried to and from his room to the bath. After that time he could walk unaided, and continued to progress till February 25, when he returned to business, gradually taking on his full duties. He had then received but twenty treatments. He has continued the use of the Turkish bath once every week since, and to this day, May 20, 1890, he has had no return of rheumatism.

Case 84.—T. B., Jr., aged 35, came to the institution April 25, 1867, suffering from rheumatism partly developed. After two treatments the rheumatism was so acute that he was unable to move without great pain, attended with high fever. After six days, during which he took two treatments a day, he was able to return to business, and has not been troubled with rheumatism since.

Case 251.—C. R., aged 20, a young German, was brought to the institution suffering from acute rheumatism, unable to walk or help himself. He was given two treatments a day, and for two days he was apparently no better; thought himself that he was worse; but in one week he was able to go up and down stairs without help, and in three weeks he left for home without an ache or pain.

Case 2248.—H. L. R., aged 55, case of rheumatism in right shoulder, reported that after the first treatment he had the best sleep of any time during the previous fortnight, and with daily treatment improvement continued to a quick recovery.

Case 2806.—W. H., aged 21. A severe case of chronic rheumatism which had existed for months. Brought to the institution by his physician. He was anæmic and much emaciated, weighing but 100 pounds. Pulse 120, temperature 101°. Only able to take a few steps with much suffering, and that with the aid of a stout cane. There was enlargement of both knees and ankle-joints, and the synovial membranes distended by effusion. After three months he was restored to health, having taken two treatments daily, and gaining in that time seventeen pounds in weight.

Case 3375.—Mrs. J. F. Y., aged 40, was brought to the institution helpless from a severe attack of acute rheumatism. Any motion of the limbs caused intense pain. After one week of daily treatment she was able to go to and from her her room unaided, and improvement continued till at the end of two months she was in better health than she had been for years before.

The one thing most prominent in the treatment of rheumatism by the Turkish bath is the fact that it works in consonance with every physiological law, and that it tends only to place the system in harmony with itself. When we secure a harmonious interchange and natural action of every function, we have the highest condition of health that the individual is capable of attaining.

Inasmuch as rheumatism is all-pervasive and all-prevalent, and the Turkish bath is its most perfect antidote, the more we spread the knowledge of its good work and help to popularize and promote its general adoption, the more we help on the better time coming, by adding to the length of days of man.

SOME NOTES ON THE NAILS.

Read in the Section of Dermatology and Syphiligraphy, at the Forty-first Annual Meeting of the American Medical Association, at Nashville, Tenn., May, 1890.

BY JOHN V. SHOEMAKER, A.M., M.D.,
OF PHILADELPHIA, PA.

In the early days of the world, before man had learned to utilize the stores of nature, the nails were of far more importance than at present. As the first weapon of attack and defense, the first implement of digging in the soil, or cutting or preparing the food, a healthy finger nail was one of the necessities for a healthy existence.

Even at the present time, they are of the utmost importance as an ornamental and useful appendage of the skin.

They preserve the delicate and sensitive nerves of the posterior terminal portion of the fingers from contact with irritative substances. They protect the sense of touch in the tips of the fingers from becoming dull by constant contact and perform a thousand other useful offices. It will thus be seen that attention to their health is of paramount importance. Fortunately for both physician and patient, diseases of the nails are comparatively limited in number. This is due to the fact that they are composed entirely of flattened epithelial scales which contain neither blood-vessels or nerves. They are, therefore, practically precluded from being the subject of either inflammation or neuralgia. They are, of course, liable to all forms of external injuries, but unless the injury extends to the structures beneath or adjacent to them, the result is not serious. The treatment of wounds or injuries to the nails is in fact a treatment of the structures which are wounded or injured at the same time. If the nail alone is fissured or broken or torn, there can be nothing done except to trim the surface down and wait for all trace of the injury to grow out, as it will do in all cases except when the matrix or root of the nail, is destroyed.

In that event the nail will not be reproduced, but the integument will become hard and cicatricial like.

One of the diseases with which the nails are liable to be affected and to which I wish to refer,

is known as onychogryphosis, or hypertrophy of the nails.

This disease consists of an abnormal increase of either, or both, the length or thickness of the nail. It is due to an excessive proliferation of the cells of the root. It may be uniform, affecting the whole nail, or only certain portions. In the form most usually observed the hypertrophy or excessive cell deposits occur principally in the central portion of the toe nail, elevating it there and producing an upward curvature. As a result the edges of the nail are depressed, and forced into the soft structures of the toe, producing more or less irritation and inflammation. In neglected cases the inflammation may lead to very serious consequences, requiring, at times, excision of the entire nail. This form of the disease is generally the result of prolonged pressure, as from tight fitting shoes, and is seldom observed anywhere except in the nails of the toes, especially the big toes. It is sometimes observed on the fingers in persons who from their occupation, or in obedience to fashion, are in the habit of wearing tight fitting gloves. Idiopathic cases sometimes occur as the sequelæ of rheumatism, scarlet fever and other diseases. This is, however, rarely noticed. The treatment of hypertrophy of the nail consists in removing the cause of the disease, and restoring the natural condition of the parts.

No remedies will do any permanent good if the cause be allowed to continue. If, as is usually the case, the disease is limited principally to the nail of the big toe and the adjacent soft parts, the patient must be ordered to remove the pressure, by either cutting out a piece from his ordinary foot covering, or to discard it for a slipper, until cured. When this is done the edges of the nail will no longer be forced down into the sensitive inflamed flesh, and relief will be given at once. The free edges of the nails should then be trimmed down as close as possible, and a mild sedative and astringent ointment applied to the painful parts. One of the best applications is a 5 per cent. ointment of the oleate of tin, or if there be much inflammation a 10 per cent. ointment of the oleate of lead.

Another excellent application is tannic acid 1 part, bismuth sub-nitrate 1 part, adipis 12 parts. If there be much pain 5 grains of powdered opium should be added to each ounce. In some cases the best results are obtained from applying pure carbolic acid directly to the raw surface. A momentary burning sensation is produced, which is quickly succeeded by entire relief from pain. A solid stick of nitrate of silver may be used to accomplish the same purpose. Another analgesic ointment is composed of salicylic acid 20 grains, ext. belladonna, 10 grains, adipis 1 ounce. In chronic cases, where the surface remains raw for days after the pressure has been removed, reparative action can usually be promptly produced by abandoning the use of ointments and dusting the surface with powdered cinchona bark, or pure tannic acid, or oxide of zinc, or bismuth sub-nitrate. If the nail remains thick, or continues to increase in thickness after the removal of all sources of pressure or irritation, its surface should be softened by frequent applications of liquor potassæ, and then gently scraped with a knife or abraded by a file until it returns to its natural condition. Nightly applications of salicylic acid ointment or plaster over the nail are also serviceable.

Internal medication is seldom required unless the pain be extremely severe, or there is some constitutional disease present. In the former instance, full doses of morphia are indicated to allay pain and procure sleep. In the latter case appropriate anti-syphilitic, anti-strumous, anti-rheumatic or other needed remedies should be freely given. If the hypertrophy is due to parasitic infiltration, it may be necessary to destroy or remove the greater portion of the diseased nail surface.

SOME ABNORMAL CONDITIONS DUE TO REFLEX NERVE ACTION.

Read before the Spokane County Medical Society, July 3, 1890.

BY R. L. THOMSON, M.D.,

LATE PROFESSOR OF ANATOMY IN THE KENTUCKY SCHOOL OF MEDICINE; HOUSE SURGEON OF MANHATTAN EYE AND EAR HOSPITAL, NEW YORK CITY, 1887; EDITOR WEEKLY MEDICAL REVIEW, ST. LOUIS, 1888-9; SEC'Y OF THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION, 1889; PRESENT SEC'Y OF SPOKANE COUNTY MEDICAL SOCIETY; MEMBER OF THE AMERICAN MEDICAL ASSOCIATION.

My purpose in reporting the cases detailed in this paper, is to give some additional testimony as evidence of the importance in practice, of keeping constantly before us one of the first principles in the treatment of disease, namely, the removal, so far as possible, of the *cause* of every abnormal condition that we are called upon to treat.

Disease in its various forms exhibits so many phenomena for which we can find no adequate cause, it is not a matter of wonder that we at times fall into a routine practice of treating symptoms.

At the same time, we are justly proud of our superior methods of diagnosis that have enabled us to acquit the liver of many sins of other organs; to stop some supposed "consumption coughs" by checking the discharge from the posterior nares; to relieve many cases of so-called fever by evacuating pus cavities in various portions of the body, and in a hundred other ways to alleviate suffering, and cure patients who would have been left by our predecessors, to endure the pain and discomfort, and in some instances to perish.

It is safe to assume, as a fact, that there is no effect without a cause, and my experience justifies the belief that there is more to be learned of the etiology of disease than has yet been made known to us. The scarcely less than marvelous advances made in the past few years toward reducing the practice of medicine and surgery to a science, should stimulate us in our exertions to achieve new successes.

Cases of vesical tenesmus due to fissure of the anus; of intense pain in the knee due to arthritis of the hip-joint; of pain under the shoulder-blade from abscess of the liver; of cough due to gastric irritation, and many other forms of reflex nerve action are familiar to us all. The cases which I now report are of a similar nature though not so generally understood by the profession.

Case 1.—Miss M. G., æt. 18, applied to me for something to strengthen her eyes. She stated that frequently while walking in the street, or sitting in the theatre, hot tears would flow almost in a stream down her cheeks. I made a careful examination of her eyes and found that they were perfectly healthy, and her vision was normal in each. The mucous membrane of her nose was somewhat hypertrophied and hypersensitive. By making applications to this membrane, I stopped the excessive lachrymation.

Case 2.—Miss K. M., æt. 24, was brought to my office by a physician. Her vision for distance was $\frac{4}{8}$ or less than one-half that of normal. As seen by her, the smaller letters on the test card were so blurred that she could not make them out. She read diamond type on a card held in her hand, but said that if at any time she continued such exercise longer than a minute or two, the letters ran together, and a severe headache was sure to follow. For eighteen months she had scarcely known what it was to be without a headache, which at times was so severe as to cause her to keep her bed. An ophthalmoscopic examination showed her eyes to be emmetropic, and they were absolutely free from disease. I examined her ears, and there was nothing wrong with them. She stated that she had no trouble with her nose, but upon inspection I found the right nasal passage plugged by hypertrophy of the tissue covering the turbinated bones. With instruments, I opened the occluded nostril. From this time on my patient had no headaches. At the next visit to my office she read $\frac{4}{8}$ with each eye, and stated that she could use her eyes for reading, writing and sewing, for as long a time as she wished. Some months later when I saw her last, there had been no return of her trouble.

Case 3.—D. R., æt. 30, applied to me for glasses. He stated that each day on his return from a morning ride in the Park, the left sleeve of his coat was wet with water from his left eye. The lachrymal passages were not closed, as there was no overflow of tears except while out riding. I could find nothing about his eye to account for this annoying symptom. The mucous membrane of his nose was hypersensitive. I treated the nose and the excessive lachrymation ceased.

Case 4.—Miss V. B., æt. 20, was brought to me by her physician, who stated that he had been trying for some months to build up her health, but that his remedies had failed. The patient had been subject to headaches for many months. Her lips had scarcely more color than her anæmic-looking face and hands. Her tongue was coated and her appetite bad.

I found her vision in the right eye to be $\frac{4}{4}$ or better than that of the average good eye. Vision of left eye was $\frac{4}{4}$ + or somewhat less than that of the average good eye. I placed her eyes under atropia and found that the right eye needed no glass; the left required a plus cylinder of one-half a dioptre, which brought the vision up to $\frac{4}{4}$. Over the right eye I placed a plain glass; over the left, the weak plus cylinder. From the day on which my patient began to wear these glasses, she had no more headaches, and in a short time she was restored to perfect health.

Case 5.—I was called in consultation to see J. L., æt. 19, who was unable to raise the upper lid of his right eye. He stated that three weeks previous to the time of my seeing him, while working around a wheat thresher he had felt something strike his right eye. The next day he applied to a physician, who treated the case as one of conjunctivitis. At the end of two weeks, the patient found that his eye was not getting well, so he consulted another physician, who everted the lid, but not finding a foreign body concluded that the ptosis must be due to a tumor in the cranial cavity. Upon examining the patient, I found some œdema of the lid, and that it could be everted only with great difficulty. There was a local conjunctivitis in the upper cul-de-sac. The ptosis was due to a tonic spasm of the orbicular muscle of the eye, which in turn was caused by some peripheral irritation. Had the drooping of the lid been due to paralysis of the nerve supplying the elevator muscle of the lid, I would have met with no resistance when I attempted to evert the lid. The symptoms seemed to clearly indicate that there was a foreign body either in the upper cul-de-sac or in the substance of the upper lid. I wrapped a small piece of cotton around a probe, dipped it in warm water, everted the upper lid and swept the entire length of the cul-de-sac twice. The second time, I brought away a piece of a beard of wheat, about half an inch in length. The patient experienced immediate relief, and his ptosis was instantly improved. I did not see him again, but I am quite sure he made a good recovery.

IMPERFORATE AUDITORY CANALS.

Read in the Section of Laryngology and Otology, at the Forty-first Annual Meeting of the American Medical Association, at Nashville, Tenn., May, 1890.

BY SETH S. BISHOP, M.D.,

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American medical books on the ear contain so little on the subject of congenital and traumatic anomalies of the external auditory canal, that it seems fair to infer that they are of uncommon occurrence in this country.

Only the following four cases of complete and permanent imperviousness of the external meatus have come under my observation during a practice of fourteen years, eight of which have afforded me quite a respectable experience in hospital and dispensary work.

Case 1 was a man 32 years old, who applied for treatment August 15, 1883. Several years previously he had been run over by a railroad train, that severed the auricle from the head. The surgeon in attendance is said to have had no hopes of the man's recovery, but sewed the auricle to the side of the head, to make the subject appear more presentable at his funeral. The result was that union of the parts took place in such a manner as to completely close the external auditory canal, and deprive the patient of any use of that ear. However, the fact that the auditory nerve had retained its integrity was established by a careful application of the hearing tests. I therefore cut away the scar tissue sufficiently to obtain a channel of nearly the natural size. There was only a slight discharge following the operation, and when the patient left the city for his home two weeks later, his hearing in that ear was good for ordinary conversation.

The result showed that the drum and auditory nerve had been uninjured by the accident, and nothing was needed to restore the usefulness of the organ beyond opening the door for the admission of sound.

Case 2.—A girl 8 weeks old was brought to my clinic October 10, 1885. There was a congenital deformity of one auricle, and absence of the external auditory meatus of the same ear. The auricle was rudimentary, and doubled forward upon itself. It appeared shrunken and pinched, and had a large, hard nodule and several indentations in that part of the helix that corresponds to the key-stone of an arch.

It is interesting to note, in this connection, that the mother attributed the deformity of the auricle to the fact that, about the fifth month of gestation, her elder child bit the mother's ear severely, at just that point that corresponds to the greatest auricular deformity in the baby.

At the point where the canal ought to have been, there was a depression or cul-de-sac that yielded to pressure, and imparted to the touch an impression as if there were an opening in the bone beneath.

Four months later, careful tests led me to believe that the child could hear with that ear. I operated to correct, as far as possible, the deformity of the auricle, and to ascertain if there were any bony meatus. On cutting down into the cul-de-sac where the canal should have been, I found nothing but a depression in the bone. No bony canal could be found, and I did not consider that further operative interference would be justifiable. However, I maintained a sufficient opening to give quite a respectable appearance of an external meatus.

Case 3.—An infant 14 months old, healthy and apparently normal, except in respect to one ear. There was no opening where the external canal should have been, and, although the patient appeared to hear on that side, the parents were unwilling that an exploratory opening should be made. I saw the case several years ago, but have never heard from it since.

Case 4.—Locomotive engineer, 32 years old, was referred to me through the courtesy of Dr. Fitch, of Rockford, Ill. When 3 years old he was run over by a wagon, that detached the auricle and tore off part of the cheek. The auricle was stitched over the meatus, and completely closed it with dense fibrous tissue. The patient stated that he had never since been able to hear with that ear, but the tests showed that the nerve was sensitive to sound.

About ten years ago, he suffered intense pain in the ear for two weeks. This was followed by a purulent discharge from a pin-hole perforation in the adventitious tissue at the highest point of the mouth of the external meatus. The discharge had continued ever since, being copious and malodorous. The exit for pus was so minute that accumulations produced considerable pain. At such times he pressed above and in front of the ear, and alternately pulled and pushed the auricle in a sort of pumping process, to work the pus out. He succeeded in this manner, and by the aid of the Valsalvian experiment, in evacuating the pus cavities.

I operated by means of the paracentesis needle, followed by a triangular-shaped bistoury. The meatus was filled with tough cicatricial tissue for about three-fourths its depth. After opening up the canal and cauterizing it with chromic acid, I inserted a vulcanized rubber tube, and retained it in position by antiseptic dressings.

After the operation he could hear my watch 1 inch, and ordinary conversation 11 feet distant. After several treatments with the Eustachian catheter and external applications, the patient resumed his occupation. When he returned again the canal had contracted, and granulations had extruded the rubber tube by one-half its original insertion. Under a 10 per cent. solution of cocaine I curetted

and cauterized the canal, and recovered the ground lost. Subsequently, however, the same experience was repeated, and the canal was allowed to close; but by this time the discharge had diminished to a few drops in the twenty-four hours, and the foul smell had disappeared.

I had already begun dilating the old perforation. Through this I could pass a probe upward into the mastoid cells, and inward parallel to the roof of the external meatus, to the tympanic attic. I proposed a more radical operation for the excision of all the occluding tissue, which would enable me to discover and remove any carious bone that might be present; but he was so well satisfied with the almost complete cessation of the discharge, that he refused, and returned to his vocation.

We found that after dilating the original opening, he retained his hearing nearly, though not quite, as well as it was through the tube.

The remarkable circumstance in this case is, that the perceptive apparatus and the conducting mechanism should retain their functions after twenty-nine years of apparent disuse. But I apprehend that, although the patient was unconscious of any hearing power in this ear, it was sufficiently responsive to sound-vibrations of a major character to give the conducting apparatus exercise, and to keep the nerve sensitive. The nature of his business lends color to this view, for its environments abounded in vibrations which would be imparted to every organ in his body. If anything in nature is calculated to arouse a dormant auditory nerve, I should imagine that nothing but Gabriel's trumpet would surpass the clanging of bells and the tooting of whistles.

Some of our authorities speak of imperforate external auditory canals as though they might be of frequent occurrence; but among the records of the Illinois Charitable Eye and Ear Infirmary at Chicago, embracing more than 8,000 cases of diseases of the ear, I find but one case of closure from exostosis, three cases of congenital absence of the meatus, and three of traumatic closure. Of course, we have found numerous cases of narrowing, and various irregularities of the canal, from causes that are not uncommon.

A reference to the following authorities will bear me out in my inference that congenital and traumatic anomalies of the external auditory canal are infrequent in America:

Roosa mentions the occurrence of congenital absence of the canal, but does not treat of traumatic closure. He records no operations to form an external meatus.

Burnett speaks of the possibility of closure, but cites only membranous and osseous formations as the cause. None of my cases were of that kind, two being congenital and two traumatic.

Green's edition of Schwartze speaks of congenital atresia, or imperforation, and stenosis, or constriction, of the canal, as "specially frequent."

Turnbull mentions congenital absence of the meatus, rudimentary auricle, and exostoses, but not as being frequent.

Mittendorf does not treat of the subject.

Jones also ignores it.

Pomeroy does not deal with the subject, although he mentions exostoses.

Sexton's book on the ear is silent on the subject.

Von Troeltsch has seen congenital absence of the meatus, speaks of the difficulties of operation, and discourages it, unless one can with certainty find the bony canal.

Buck has nothing on the subject, but mentions membranous closures.

Congenital cases have been reported by the following authors: Moos, Knapp, Jäger, Welcker, Robb, Hessler, Zaufall, Steinbrügge, Zuckerhandl and Michel.

Politzer's classical work on the ear advises an "operation in congenital atresia of the external auditory meatus only when it has been with certainty ascertained, by careful examination, that it is a case of congenital thin-walled septum at the entrance to the ear. When the atresia extends far inwards, so that the canal cannot be made out, or only a solid cord, operation must be avoided, as irrational and dangerous.

Virchow's Archives, Bd. 30, S. 221, and Bd. 32, S. 518, says: "Congenital anomalies of the external ear and its neighborhood are to be referred to early disturbances in the closure of the first branchial cleft, and are often associated with fistulæ of the other branchial clefts, cleft palate, and other forms of arrest of development in the facial bones—as, for instance, with unilateral atrophy of the face."

70 State St.

MEDICAL PROGRESS.

TOXICITY OF BORIC ACID.—By some authors boric acid is considered not more toxic than table salt, and it has been extensively employed as a disinfectant in the preparation and canning of foods. That it is occasionally poisonous has been recently demonstrated in the journals, and now we have the communication of DR. G. LEMOINE (*Gazette de Paris*) describing four additional cases.

The first case was that of a paralytic, with a bed-sore that was dressed with a powder containing boric acid; on the fifth day there appeared an eruption which gradually covered the whole body. The temperature rose, pulse frequent, severe headache, sleeplessness and delirium, with vomiting. After changing the dressing there was improvement in all the symptoms, and at the end of the sixth day the eruption had disappeared. After some days the boric acid was again employed,

and was followed by similar symptoms that disappeared after its discontinuance.

Dr. Vincent describes two similar cases, in one after washing out the pleural cavity with a 4 per cent. solution there was vomiting, urticaria, delirium; these symptoms disappeared when the cavity was cleansed with pure water, and returned when the boric acid was again used. In the second case, one of bladder operation, the boric acid caused similar poisonous symptoms, but without the vomiting and urticaria. In another case, a laparotomy (Prof. Dubar), severe poisonous symptoms developed, with an erythema of the abdomen and thighs, that lasted twelve days. There was also fæcal incontinence. The pulse and temperature were not materially altered.

It is noteworthy that the first case had chronic heart trouble and interstitial nephritis. The last case also had albuminuria. This may be the possible explanation why poisonous symptoms are so rarely noted in the use of boric acid. By the healthy kidney it is rapidly eliminated, but when they are diseased it accumulates in the system and causes poisonous symptoms.

ASEPTIC OPERATIONS. — FRITSCH (*Deutsche Med. Wochenschr.*) claims that the most important discovery in modern antisepsis is that carbolic acid and sublimate are not needed in fresh, clean wounds; that dirty wounds must be cleaned, goes without saying, but clean tissues are only injured by antiseptics. Fritsch has of late used only 0.6 per cent. sterilized solution of sodium chloride, in all operations, even the severer ones in the abdominal cavity. When this cavity is irrigated with solutions of carbolic, salicylic, or boracic acids, depressed heart's action and collapse frequently appear. A directly opposite condition is produced by irrigation with warm salt solution; indeed, this method may be used to prevent the more serious symptoms of surgical collapse.

RESECTIONS OF THE STOMACH AND INTESTINES.—At the recent Medical Congress, PROFESSOR BILLROTH read a paper on resections of the stomach and intestines. One hundred and forty cases were recorded which comprised the whole of those that had come under the Professor's own hands. The technique of the operation was scarcely alluded to, as it had already before been published. The plan of suturing adopted was that known as the Lembert or Czerny-Lembert plan, the latter being seldom adopted, whilst occasionally the plan had been adopted of inserting one piece of intestine into another. Practically about half the patients had recovered from the operation, though, as will be seen from the subsequent account, the mortality is far greater in certain classes of operations, and more particularly is this the case when the upper part of the small intestine is affected. Of pylorus resections, about twenty cases had been operated on by him, half of which died from the operation itself. All of the cases in which this operation was performed were the subject of cancer, though some were far more favorable to operate on than others, as the disease was not at the time of operation very infiltrating in character, but was chiefly confined to one spot, where considerable ulceration had taken place. Where there was much infiltration of the surrounding parts, an operation was almost impossible. Of those that survived the operation, some four or five had lived in comparative comfort for a few months; two cases had survived from one year to a year and a half; one case had survived two years, and one was alive five years after the operation. Twenty cases of gastro-duodenostomy were recorded, one half of which had been performed by Wölffler's method (in front of the transverse colon), and one-half by Hacke's (behind the transverse colon). They had nearly all been attended by temporary success, which of course was all that could be expected. Of ten cases of resection of the small intestine with the formation of artificial anus, all recovered from the operation. On eight or ten occasions the cæcum had been removed, but it was a difficult operation, and did not yield satisfactory results. It was best to insert the small intestine into the large after such an operation. In two cases of cancer of the descending colon he had attempted resection, but both had died. In the case of the rectum the results were remarkably good; none had died directly after the operation. In two instances a portion of the rectum had been excised, and the upper and lower end of the bowel brought together. Senn's plates had never been used by him on the human subject, but he had employed them on the dog, and was satisfied with their efficacy.—*British Medical Journal.*

TREATMENT OF DYSENTERY WITH INJECTIONS OF BICHLORIDE OF MERCURY.—LEMOINE (*Bull. gén. de Thér.*) has had an opportunity to treat 102 cases of dysentery in the military hospital of Oran. Fifty-four were treated with sublimate clysters, and only those who could not take calomel owing to some disturbance of the stomach; 21 with calomel, with a beginning dose of 1 gram followed in the next two or three days by smaller doses; 11 with ipecacuanha; and 16 in the beginning with ipecacuanha, and later, as it did no good, with mercury. No deaths were noted, and ordinarily 1 gram of calomel was sufficient to check the slimy and bloody stools. In 28 of the cases, the favorable results were immediate. The clysters, consisting of 200 grams of a 5 per cent. solution, were commonly retained about ten minutes, and worked rapid improvement in the tenesmus and slimy discharges. In some cases, owing to the sensitiveness of the anus, it had to be

painted with a solution of cocaine. In many cases the calomel was given in connection with the clysters. Poisonous symptoms were not noted in any case. The author refers the favorable action of mercury in these cases to its antiseptic power.

On the Occasional Failure of Casts in the Urine.—Dr. Ernst Sehrwald (*Deutsche Med. Wochenschr.*) says that occasionally cases present themselves in which a urine, rich in albumen, contains no casts. If the urine is examined in separate portions or each hour, it will be found that the different parts will differ in the number of contained casts. How is this difference explained? The one that naturally presents itself is that some portion of the kidney more involved than the balance, has secreted that portion rich in casts. If this were true, the amount of albumen would also vary, but this is not the case. The author thinks he has found the true explanation, in that the casts have been destroyed by the pepsin contained in the urine, it exerting its proteolytic action in the acid urine. The proportion of pepsin is always greater in the urine containing the less number of casts.

Late Syphilitic Infection.—M. Charles Mauriac communicated to the French Society for Dermatology and Syphiligrophy (*Annales de Dermatologie et de Syphiligrophie*) an authentic case of infection four years and nine months after the primary accident. He was consulted in 1885 by the patient and treated him for a primary lesion. The secondary symptoms were not marked and soon subsided, but for the next two years there were occasional appearances. At this time the patient expressed a strong desire to marry, providing that he could be assured that he would not infect his wife. At this time he occasionally had slight herpetic eruptions, and the danger of these, from an infectious point of view, was described. The patient had a fixed idea that he would infect his wife, but at the end of four years and nine months from the date of primary infection married. Unfortunately, his prediction proved to be true, for a short time after marriage his wife presented all the appearances of recent syphilitic infection—roseola, mucous patches, etc.

In the discussion M. Hardy said it was very difficult to fix a time with certainty, when a syphilitic would not infect a wife or child. Fournier placed the time at five years and over.

The Medico-Legal Aspect of Abdominal Section.—The technique of abdominal operations has attained so high a degree of excellence that it would seem that little remains to be accomplished to render it absolutely perfect. Unfortunately, the same cannot be said of our diagnostic resources in conditions of disease within the abdomen, which are still far from being adequate. Every now and then we read of cases occurring in the practice of careful and skilled surgeons, where errors of diagnosis have led to the performance of abdominal operations attended sometimes with fatal results. If these errors have been made by men of acknowledged diagnostic ability, they are much more likely to occur in the practice of surgeons of less skill and experience.

It is therefore a matter of importance to determine how far the surgeon can be held responsible for these diagnostic errors, since the greed of attorneys and the avariciousness of the patient's relatives not infrequently place him in the disagreeable position of defendant in a civil or criminal law suit. At the last meeting of the American Medical Association two interesting and instructive papers were read by Drs. Vanderveer and Wile, on the subject of the "Medico-Legal Aspect of Abdominal Section," which are reported in the Journal of the Association. Dr. Vanderveer states that in the trial of medical men for malpractice, charges to juries have been uniformly that gross neglect or gross ignorance, or both, must be shown on the part of the prosecution, beyond a reasonable doubt, before conviction can be had. It should be borne in mind, however, that it is impossible to make precise distinctions between negligence and ignorance, and gross negligence and ignorance; for that which under some circumstances would be ordinary skill, in other circumstances would be ignorance, and in still other circumstances gross ignorance. The responsibility which the surgeon should assume in the class of cases under consideration is well stated in Dr. Wile's paper: "Laparotomy to-day is, in skillful hands, a recognized operation, and there are certain conditions of disease or accident which can be reached only through abdominal section. The surgeon must be certain, as far as possible, from his diagnosis, that a given condition, or conditions, warranting exploration, exist. He ought to be accurately informed as to the correct method of reaching the parts through operative interference. He should know just when the operation ought to be performed in order to obtain the best, or safe results. Beyond this the responsibility lies with the patient or patient's friends. They should be informed of the danger of the disease as it exists unrelieved; they should be informed as to the gravity of the operation, and its risks, and they should be warned that in the event of unfavorable result, either through failure of the vital powers to stand the shock, or from a too great extent of diseased parts to permit successful manipulation, or even in the case of a possible mistaken diagnosis after sufficient consultation has been had, the doctor shall not be blamed."

It is an unfortunate fact that suits of malpractice against surgeons are tried before juries of

laymen, who are unacquainted with the mere rudiments of the surgical art. Moreover, the prosecution is frequently permitted to adduce, as expert testimony, the opinions of men who have never performed a surgical operation of magnitude, and who are perfectly ignorant upon the subject on which they are asked to testify. The experts testifying in these cases should be appointed by the State, and selected from among men of acknowledged surgical skill and ability. By the adoption of some plan like this the accused party would be certain of a fair and impartial investigation of the points at issue. However comforting the reflection may appear that the unjust decisions of juries are usually reversed by the superior courts, it must not be forgotten that the accused surgeon has been subjected to a large expense and loss of time, not to leave out of consideration the anxiety and worry inseparable from every law-suit. And we would heartily re-echo the sentiment expressed by Dr. Vanderveer, that the laws should be so modified that surgeons may have better protection in the recovery of time, for expenses they have been put to, when it is proved that the case was urged by some disreputable lawyer, or by those personally malignant, within or without the profession.—*International Journal of Surgery.*

EFFECT OF OPERATION WOUNDS ON THE HEART.—DR. J. TANSINI has made a number of experiments on animals with a view to determine the effect upon the heart's action of operation and other wounds of the skull, the pleura and the abdomen. In operations of the skull he finds that the heart is less affected by the use of the trephine than by that of the chisel. The latter may, however, be employed with impunity even upon a skull that is still entire, if an instrument of small size be used, and if it be inclined at an angle of 30° with the surface. When an opening has already been made into the cranial cavity, the use of the chisel appears to exert no disturbing action on the heart. A plug outside the dura mater is much more prejudicial than one applied directly to the brain substance. Venous hæmorrhage can always be arrested by the latter without any serious interference with the heart's action. Washing out the lateral ventricles produces but little effect on the heart if there is a free exit provided for the liquid. Ten experiments were made on the pleura, from which it appears that an opening of either the right or the left thoracic cavity has a very serious effect on the heart, causing at first irregularity and subsequently diminution of the movements. Continued washing out of the cavity with cold water at 11° C., or even at the body temperature, slows the heart to a more marked degree, and causes the animal to die more rapidly. The various antiseptic solutions do not appear to behave differently from plain water, with the exception at least of those that are definitely poisonous. Wounds of the abdomen, producing prolonged irritation of the abdominal nerves appear to slow, and ultimately to arrest the heart's action.—*Lancet.*

HYPNOL OR MONOCHLORAL-ANTIPYRIN.—DR. SCHMIDT, of Nancy (*Les Nouveaux Remèdes*), presented to the Biological Society his observations upon two new compound substances—the monochloral-antipyrin and bichloral-antipyrin. As a soporific he found that 1 gram of the former was equal to .55 gram chloral, and the latter to .60 gram. Both substances produced a fall of temperature, the bichloral being more energetic than the mono. Their action upon respiration was not sensibly different from that of chloral hydrate. They diminish the force and frequency of the heart's action, but to a less degree than chloral hydrate administered by the stomach. Both substances are toxic, due to their contained chloral. Monochloral-antipyrin has several advantages over chloral hydrate, as it is easier taken, and soporific effects are obtained with a minimum disturbance of the heart and circulation. The question of the analgesic property of these drugs was distinctly reserved.

DISINFECTION OF THE HANDS.—BALL (*Deutsche Med. Wochenschr.*), has studied carefully several methods, and has come to the conclusion that that recommended by Miculicz is the safest and best. It consists essentially in: 1. The removal of visible dirt from the finger-nails with knife or shears. 2. Then the hands are washed and brushed for three minutes, in warm water with potash soap. 3. One-half minute in 3 per cent. carbolic acid solution, and then rinsed in a 1:2000 sublimate solution. 4. Lastly, the space under the nails and the root of the nail are rubbed with damp iodoform gauze for about one minute.

Ball has made some experiments with pure cultures of the staphylococcus aureus, with which he infected his hands, and then applied this method. The results showed that it was a certain means of sterilizing the hands, it being a matter of indifference whether they were previously infected or not.

PILOCARPINE IN DERMATOLOGY.—DR. H. G. KLOTZ, of New York, in a paper read at the annual meeting of the American Dermatological Association, on the 2d inst., gave a review of the history of pilocarpine in dermatology. The author had employed this remedy in a few cases, including some of eczema, pruritus of the anus, and affections with dryness and irritation. The result had been such as to encourage him to give it a further trial. It might be given internally or by hypodermic injection, small doses, long continued. A tenth of a grain was likely to prove sufficient to keep the skin moist.—*Boston Med. & Sur. Jour.*

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SATURDAY, SEPTEMBER 20, 1890.

THE TREATMENT OF SYPHILIS.

This always interesting topic was discussed at the recent International Medical Congress at Berlin, with the result of but little new information being added to our knowledge of the subject; although a review of methods of treatment and a comparison of results obtained, is not without value to new workers in any branch of medical science.

DR. M. H. LELOIR considered that the physician was justified in excising the primary syphiloma: 1. When the chancre was seen at its commencement; 2. When the chancre was situated where excision was easy and without danger (labia, prepuce, etc.); 3. When it was not yet accompanied by adenopathy; 4. When a unique chancre, or several chancres, could be removed easily; 5. When the patient was not diabetic, albuminuric, etc. Excision may be a means of aborting or of attenuating syphilis; and the facts on which these statements rest are sufficient to prove that, contrary to well known opinion, the chancre is not the first of the secondary accidents, and does not introduce the infection into the system but, in reality, produces it. Where excision does not abridge infection it may be because it is insufficient, and does not remove the entire area of sclerosis. Specific treatment should not be commenced until the appearance of the secondary symptoms, because the diagnosis of primary syphiloma is not always an easy thing; and to preventive treatment in the beginning may be ascribed the non-appearance of secondary symptoms, so that certain patients—believing themselves syphilitic—affect their health by using mercurials and iodides, while others—actually syphilitic—totally neglect treatment. His statistics of cases treated with mercury *ab initio*, and of those treated on the appearance of the secondary symptoms, show that late accidents have not been more frequent in one class than in the other; in fact, some of the most refractory cases of cutaneous and mucous syphilides were in patients placed on mercurial treatment when the chancre appeared. The chancre should be treated locally with VIGOS' plaster, of the French codex, or the emplastrum hydrargyri of UNNA; with lotions applied twice a day. From 2 to 4 grams of mercurial ointment are applied for fifteen days, then an interval of from fifteen to twenty days is allowed to pass, and this alternation is continued for a year. Certain rebellious cases of cutaneous syphilis may need general baths, containing 7 grams of bichloride of mercury. Hygiene of the mouth, general hygienic and tonic treatment, and occasional trips to the country or seashore, are required. During the second year the frictions are given for ten days, at intervals of from three to six weeks; and if there is freedom from syphilitic symptoms the inunction may be used, during the third and fourth years, only in the spring and fall. He avoids mercury internally whenever possible, on account of the digestive trouble it may cause; while he uses it hypodermatically only in hospital cases, because such patients neglect their medicine.

DIDAY gives ½ gr. of protiodide of mercury three times a day, with iron and iodide of potash in anæmia. He believes things proscribed are more important than things prescribed. DRS. SCARENZIO and LANG use hypodermatic injections of mercury; while NEUMANN conservatively holds the necessity of considering the individual conditions and following an active case by preventive treatment, or by symptomatic treatment, or by intermittent treatment, continued no longer than two years.

It seems to be agreed by the participants in the discussion that excision of the chancre may, at least, attenuate the disease; this experience has not been corroborated by American syphiligrophers, and we believe is but rarely practiced in this country. So with adenopathies; excision of the glands does not obliterate the many lymph channels that are conveying the syphilitic poison.

The consensus of opinion seems to be that there is no advantage in commencing treatment until the secondary infection is manifest; a conclusion that is generally practically applied among us. But the hypodermatic treatment has not as yet been generally adopted, largely on account of the intolerance of patients; and inunction has the disadvantage of uncleanliness, aside from its liability to cause skin affections, as well as uncertainty of dosage of mercury absorbed. As VIRCHOW has said, the treatment that is best tolerated may be dangerous; and in nothing, more than the treatment of syphilis, is eternal vigilance on the part of the physician the price of the patient's liberty from tertiary manifestations of disease.

THE INFLUENCE OF NEWSPAPERS ON THE HEALTH OF THE COMMUNITY.

At the late meeting of the Social Science Association at Saratoga, DR. F. W. RUSSELL, of Winchendon, Mass., read a paper pointing out the evils of sensational descriptions of crime and accidents in the daily press. He asserted that minute descriptions of crime were an educational power to weak minds to commit similar acts in the same way. This was proven by the similarity of particular crimes, that had been minutely detailed in the daily press. In one instance a suicide had devised an ingenuous apparatus for hanging. This was given in sensational detail by a daily paper, and within a few months four similar cases were noted in which the same apparatus were used, showing that they had been copied from the first description.

Many similar instances will be apparent to any one who studies the histories of crime as given in the daily press, especially if it has attracted much attention. The similarity of detail as to method and manner of execution, shows that the press has educated the criminal and pointed out the methods of committing the crime.

The sensational descriptions of cyclones was mentioned as particularly dangerous to a certain class who, on the approach of any storm, gave way to the most morbid impulses of fear and alarm. The most alarming symptoms of nervous prostration followed the appearance of any approaching storm, that resembled the description given in the papers. In cases of accidents the doctor had noted a marked change in the health of persons who had read the details minutely.

In asylums the influence of these sensational accounts were exceedingly dangerous, and all such papers had to be excluded. The effect on the mind of comparatively healthy persons of the sensational details of crime, and casualties, was always bad, and especially on nerve exhausted and defective brain organizations.

To young persons it is practically worse and more disastrous than obscene literature or pictures. The morbid impressions it produces and shock to the higher nerve centers, leaves a permanent enfeeblement that is traceable. The cheap novel, however sensational, was more or less unreal to the reader, and could not enter so minutely into his daily life, but the newspaper accounts of atrocities were accepted as positive histories, that roused, excited, and became a large part of the thought of the reader for the time, forming naturally a degree of education to govern all future conduct.

Some very interesting illustrations were given of the effect of journalistic sensationalism and its far-reaching disastrous effects on all communities. The doctor concluded that the remedy was to appeal to the press to publish no details of crime, and thus raise the tone of its readers, and also to withdraw all patronage from papers of sensational character. The comments on this paper by the press have been in most instances very kindly. The defense was that details of crimes and accidents are demanded by the public, and this publicity has a deterrent influence in most cases, preventing crime for fear of publicity. It is evident that many of the cheap sensational dailies are not only bad but dangerous in their influence on the minds of the readers. The morbid glorification of criminals is the direct result of minute exaggerations of his life and crime. The same detailed accounts of his crime create an air of superiority that is fascinating to many minds. It is also evident that medical men have a duty to correct and educate public sentiment in this regard. There are mental influences at work in all communities that are as potent for harm as poisonous germs, and the physician should be the counsel and adviser.

Dr. Russell's paper suggests a new field of study and observation. If it can be shown from facts gathered over wide sections of country, that detailed histories of great crimes stimulate crime of like character, as in the case of the "James boys,"

a remedy for the evil is demanded at once. It is asserted that a history of the "James gang" has produced several similar organizations, whose depredations were such close imitations, as to suggest the inspiration from this history alone.

The effect of any horrible event, when given in detail, on the minds of the community opens up a wide field of psychological study of great interest. The observations and conclusions reached by Dr. Russell, have been made before, but they came to-day with peculiar interest, and have a larger significance than ever. Sensational journalism has attained great proportions, and the dime novel and trashy story is put in the background. How far does this journalism influence public health? How far does it cultivate crime, and morbid mental states, dangerous to the community? How far does it stimulate disease and disease conditions? How far does it pervert and damage all healthy mind and brain growth?

These are only a few of the questions which the profession should be prepared to answer.

EDITORIAL NOTES.

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION.—In previous issues of THE JOURNAL we have called the special attention of our readers to the fact that the next annual meeting of this prominent medical society will convene at Louisville, Ky., on the 8th of October. The medical profession of that city have made every possible provision for a most successful meeting. Special arrangements have been made at the hotels and reduced rates have been secured on many of the railroads, and we shall be greatly surprised if the medical men of the Mississippi Valley and their friends from less favored regions are not largely represented in that meeting. The very efficient Chairman of the Committee of Arrangements is Dr. I. N. Bloom, of Louisville, who will be glad to render any needed service or information.

A CORRECTION.—Referring to the cause of the death of the late Dr. Robert Stephenson, of Adrian, Mich., while in attendance at the Medical Congress at Berlin, the associated press seems to have been guilty of a serious misrepresentation. So far from being true that he died from an "overdose of morphine," the facts, as the result of careful post-mortem examination, reveal that he died from cerebral hæmorrhage from a ruptured vessel in the pons varolii. A sensational report should never attach to a name so fair and so honored as his, and the press, if it be not more discreet in the selection of its correspondents, is guilty of a crime.

A WORLD-WIDE BROTHERHOOD.—It is a significant fact that medical science knows neither geographical boundaries nor national restraints. Millions of men may be under arms for the preservation of international peace, and yet the devotees of medicine from every land may meet in any domain, and under any flag, heartily reciprocate the kindliest courtesies, and labor as brethren in a common effort for the alleviation of human ills, receiving on every hand a heartfelt welcome.

To the honor of the medical profession be it said, that the world has never seen such another manifestation of international comity as has just been witnessed at Berlin. The representation from all the principal nations was such as to command profound respect everywhere, and the influence upon the nations represented must have its beneficial influence. The courtesies awarded by the Germans to their French visitors will be sure of a generous response; America will surely be accorded a name and a place upon this planet, and the fact that the centre of medical achievement seems to be nowhere, and that its circumference is everywhere, will lead the way to more and more generous recognition of *genuine* work and worth regardless of clime or previous condition.

One of the mighty agencies for the unification of the nations will be the unification of their medical men. The international congresses are simply heralding the advance.

THE SANITARY CONDITION OF CAIRO.—The want of proper action on the part of the British Government with reference to the sanitary condition of Cairo is being severely criticised. The Internal Board of Health, appointed some seven years ago, seems to have accomplished little or nothing in the way of sanitary improvement. Its water-supply is said to be filthy, and a heavy death-rate prevails at the Egyptian capital. Cholera prevails in the city, and at neither of the quarantine stations, where pilgrims are detained, are adequate provisions made for the patients themselves, or for preventing the further spread of cholera in Egypt. Favoritism and nepotism are said to be responsible for the neglect. Expert

service is demanded at such a crisis as this, and no time should be lost in the correction of such a criminal neglect. The British government owes it to herself and the world to place the City of Cairo under the best possible sanitary surveillance, and that at once.

DEATH OF DR. VON JELENFFY.—This distinguished Hungarian laryngologist became suddenly sick after attending but a single session of the Congress at Berlin, and has since died. Most of the members of the Section on Laryngology who remained in the city were in attendance at his funeral, at which Dr. Fraenkel, the president of that Section, presided.

HIPPOPHAGY IN BERLIN.—The *Lancet* says: "It is stated that, in compliance with the public wish, a horse-meat restaurant has been established at Berlin, wherein a large trade is carried on." It seems remarkable that the meeting of the Medical Congress should so soon be followed by a meat famine.

MURDER OF THREE PHYSICIANS.—According to a Dalziel's telegram from Madrid, dated the 27th ult., the physicians at work in the cholera-infected districts continue to receive ill-usage from the peasants, who are opposed to the precautionary regulations upon which they insist. Notwithstanding that the physicians are provided with military escorts, they are still subjected to violence. In Valencia a physician has been killed by a stab in the back; at Mogente another doctor had his head split in two by a hatchet wielded by a woman; while a third was set upon and killed by an infuriated mob near Lerdo.

ADULTERATION LAWS IN RUSSIA.—The Russian government has recently enacted some very stringent laws against the adulteration of food and drink. Any person guilty of adulterating any article of food will be liable to a fine of $200, or imprisonment for three months, for the first offense, double this penalty for the second, and deprivation of all rights as a citizen for the third. What a sweeping revolution would follow the enactment of such a law in the United States. As a question of profit and loss, it would be simply stupendous.

DEDUCTIONS FROM EXPERIMENTS WITH DRUGS.—The *Progrès Médical* states that Dr. Huchard recently read a paper on "The Physiological and Therapeutical Action of Drugs" before the *Société de Thérapeutique*, calling attention anew to significant differences in the action of certain drugs in the well and in the sick and in various forms of disease. For example, it was stated that quinine lowered the temperature in typhoid fever, but had no such effect in erysipelas. The lesson to be drawn from such facts is that it is not safe to make sweeping therapeutic deductions from observations of the physiological action of drugs; to use the author's words, "physiology should not enslave medicine."—*N. Y. Med. Journal.*

CHOLERA INTELLIGENCE. — Cholera is still prevalent in Spain. The infected provinces are Valencia, Alicante, Castillon, Tarazona, Badajoz, Carthagena and Toledo. The total number of recorded cases up to the date of August 23 was 2,314, of which 1,167 had proved fatal. Over 20,000 persons have emigrated from Spain to France, but thus far no cases of cholera have been reported from any part of the French domain. Reports to August 25 state that up to that date 2,727 deaths from cholera had occurred at Mecca, and 1,083 at Jeddah. The disease is prevalent also in Japan, and the report of its appearance in Tokio is confirmed. The near approach of cold weather leads us to hope that its present severity will be mitigated, and that its progress will be stayed.

THE BRITISH warship *Buzzard*, which recently arrived at Halifax from Jamaica, is reported to have had nineteen cases of yellow fever on board. The report adds that one man died on the voyage, and was buried at Port Royal. Five of the men, it is expected, will recover.

SEVERAL cases of leprosy have, it is reported, been discovered in Englishtown, Cape Breton Island. The victims are said to have been in constant association with the other inhabitants.

THERE would appear to be a recurrence of influenza in Vienna. Several cases are stated to have occurred in the hospitals there. In Paris also the disease is said to be reappearing.

SMALL-POX EPIDEMIC.—A telegram received from Pernambuco states that 4,000 cases of small-pox had occurred there, with an average of fifteen to twenty deaths a day.

TOPICS OF THE WEEK.

THE POWER OF CREATION.

In whatever department of thought we find it occupied, the very nature of science is hostile to uncertainty. Facts, indeed, are not its constant possession, but its object, nevertheless, is always to know the truth as true beyond possibility of doubt. Nothing therefore can, in strict conformity with its character, be received on mere trust. All that is accepted must be capable of proof, and anything that cannot be thus verified, though true it may be, is to science a thing not known. In reference to all such matters, its position is that of the agnostic, properly so-called; not, that is to say, of a mere creedless bigot, but of an expectant and cautious investigator, accepting in belief only that which he has proved. In virtue of this very position, however, the description here given is but a partial one. It applies rather to a purpose than an actual condition. It is a true portrait of exact science only, and it leaves untouched the illustration of that far-reaching principle by which every branch of knowledge is made subject to the law of development, and passes through doubts, conjectures, and shrouded truths to the brightness of clear understanding. Science is no exception to this rule. It has its tentative theories, its mutable facts, and provisional acceptances, and its position would be logically untenable if it were to deny to other modes of thought a share in that charitable consideration which allows time for its own conclusions, however crude, to be planned, marred, recast, and slowly matured. The assumption of such a position would indeed be suicidal, for it implies a fatal schism among the forces concerned in philosophic inquiry. Science and philosophy, it must be remembered, are not contraries. They are merely the obverse and the converse of the same intellectual process, the former objective, the latter subjective as to its rational method. Either may, in the wider acceptation of its meaning, be taken to include the other, and it is only the prominence of one, the physical application of scientific study, which has associated the former with what we call matter, as distinct from spirit or mind, the natural sphere of the latter. However diverse they may seem to be, distinction between mind and matter is, in the present state of our knowledge, impossible. We are as yet without experience or information respecting the separate condition of one or another. At all points matter is instinct with incorporated properties which constitute the law of its being, though whence derived its atoms cannot tell us; and mind, on the other hand, can only confess itself through its physical manifestations. Though we should penetrate, if it were possible, beyond the earliest known traces of our world, we might still be as far as ever from a solution of the mystery, but at no stage could we expect to pass beyond the age at which these two became united. Everywhere we still find, whether in vital activity or in the buried vestiges of old-world existence, the sure signs of cause and effect. The design may vary, but its evidences are never wanting. Some, perhaps, may prefer to regard it as the essential possession of matter, and to dignify this with the attributes of a creator. We cannot but think, however, that the very diversity of material forms, and their infinite variation in conformity with some discoverable purpose in each case, mark them out rather as the vehicles of some compelling force implanted in them. That this force is not purposive, but fortuitous in its action, is incredible. Given a certain stage in the progress of development, circumstances may, indeed, accomplish many modifications, as the laborious genius of Darwin has abundantly proved; but even these are governed by strict limitations, are apt to be transient in character, and are rather differences of degree than alterations in type. The argument for intelligent design is not seriously impaired, in our opinion, by such evidence of a merely material agency, and there is every reason to believe that this view is yearly gaining ground among the more scrupulous thinkers in physical science. It is significant to find an authority like Professor Tyndall, despite his belief in matter and force as primary factors in the production of life, admitting the probable existence of a "power of creation," which he associates with evolution, and proposes to invest with some feeling akin to worship. Professor Huxley's condemnation of materialism as "the most baseless of dogmas" is also—at least constructively—suggestive of a disposition to include within the beliefs of natural science the existence of a supreme directing intelligence.—Editorial, *London Lancet*.

MEDICAL SCIENCE IN THE LAY PRESS.

"Save us from our friends!" would probably be the exclamation of Dr. Vaughn of Ann Arbor, Michigan, when he took up his daily paper about the middle of last month. Dr. Vaughn's work in connection with ice-cream poisoning and tyrotoxicon, and his *brochure* on animal poisons, are both so well known that an inflated newspaper paragraph can scarcely do him much harm; but the system of lay press eulogy and advertisement that has grown up under the fostering care of those whose knowledge is somewhat limited, but whose desire for public recognition is an inverse ratio, would not protect from the derision of right-thinking men many so-called scientists. Dr. Vaughn has probably published, or there will be published through some other channel than the lay press, the results of his work on cholera infantum and typhoid fever. He has followed up the work of Hankin, Brieger, and Fraenkel, Roux and Yersin, and others, and he has added another to the list of tox-albumoses. The work that he has done is probably both thorough and sound, and we shall anxiously await the arrival of the record of such work in this country. It seems rather hard in his case that his fellow countrymen should in their hysterical excitement so magnify the work that they speak of Dr. Vaughn as a rival to Jenner. That the work is "a triumph to the States" will be fully admitted, more, however, from the fact that it adds another to the many proofs of the existence of a number—a number that is rapidly increasing—of highly educated, thoughtful, and skilful scientific medical men in a country where, not many years ago, the standard of medical education could not be said to be very high, and

where, even at the present, it is lower among the general practitioners than in any civilized country. America is the home of short curricula, and the happy hunting ground of the various "pathists" and quacks, but that there is an ardent desire for better things the very fact that such an article (ludicrous though it is in many respects) as that before us could be written, and could be acceptable to the readers of the *Ann Arbor Argus* of July 15, 1890, and the *Philadelphia Record* of an earlier date, is evidence. We have got beyond the extravagant stage in this country, but it would be well if many of the so-called medical articles that appear in our lay papers were suppressed.—*Lancet.*

COURT RECEPTION AT BERLIN.

By command of the Emperor, a Reception and Garden Concert was given at Potsdam, at which Prince Leopold, of Prussia, the Emperor's cousin, received the guests, attended by Count Caprivi, Court Marshal Count Eulenberg, Herr von Gossler (Minister of Education), and other high officials. Invitations were issued to 500 guests, selected from many of the leading British delegates and members. At the reception, which took place in the Shell Room, the guests were arranged according to their nationalities, and Prince Leopold, in walking round the circle, caused a number of the representative visitors to be specially presented to him, addressing to each of them a few words of courteous welcome. Subsequently a concert was held in the garden, in the course of which Prince Leopold mixed with the visitors, and conversed with them on subjects likely to interest each. Refreshments were served, and the party returned, being taken back to Berlin by the special train which had brought them. Everything was done to make the medical guests of Germany feel that the German Emperor fully participated in the cordial and generous welcome which had been given to them by the municipality, citizens, and the profession of Berlin, and desired to mark his gracious goodwill to the Congress and its members. Happily the weather on this as on all the other days of the Congress was peculiarly favorable, and the Court function was in every way an interesting and successful one.

FRENCH DEFENCE OF ILLIBERAL MEDICAL LEGISLATION.

Galignani's Messenger, of July 21, replying to the arguments of The *Lancet* attempts to defend the projected illiberal law of the Republic requiring foreign medical practitioners, including English, holding diplomas of good repute, to pass a French examination before being allowed to practice in France, even among their own countrymen. The attempt is lame and inadequate as regards our diplomas. It is chiefly based on three points: first, some of our English examinations are so bad as not to compare with the French. As an illustration of the accuracy of our contemporary's information we will give one specimen. He speaks of the licence of the Apothecaries' Society being gained by 97 per cent. of those who seek it. We know no ground for this assertion. The facts of the examination of the Society for the last year are before us and are as follows: At the first examination 12 were rejected and 17 passed; at the second, 14 were rejected and 25 passed; at the final, 53 were rejected and 125 passed. The examinations have been inspected by the General Medical Council and declared to be sufficient. Our contemporary admits that we practically allow Frenchmen to practice in England without let or hindrance, but says that we do so because the privilege is of no such value as the corresponding privilege to Englishmen in France. This is ungracious and weak. Let the liberal Republic at least be as liberal as we are and enjoy the praise of being more disinterested. Meantime can anything be more ungenerous than to refuse English people, resident in France, medical advisers of their own country, certified by its medical authorities. We shall not answer the less polite insinuations and even assertions of our contemporary that, with some few exceptions, English representatives of the profession in France are eminently unsatisfactory. His elaborate argument against their admission is a fair presumption that they are no mean competitors for practice even among Frenchmen.—*Lancet.*

ANTISEPTICS AMONG THE ANCIENT GREEKS.

Prof. Andreas Anagostakis, of Athens, gives in the *Deutsche Medicinische Wochenschrift* some interesting facts in reference to the employment of antiseptic measures among the ancient Greeks. Hippocrates and Galen were aware that an unclean condition of wounds retarded healing. They were also well acquainted with the fact that by thorough hæmostasis, suture and the employment of antiseptic measures, infection of wounds might be prevented. Hippocrates warned his disciples against the use of moist dressings, on account of the danger of suppuration, and forbade the employment of drugs before the wound was dry. Above all, says Galen, avoid dirt, as it prevents healing. The ancient Greeks boiled their water before applying it to wounds. Sponges were avoided, and charpie recommended in their stead, which was to be destroyed after use. One of the principal antiseptic substances then in use was wine, which was usually heated before using, and with which, according to Hippocrates, all wounds were to be washed. Dressings dipped in wine were also applied to the wound. Salt was in very general use, either in solution or in the form of sea-water. The solutions were rendered aseptic by boiling. Sulphate of copper was relied upon as an antiseptic for foul wounds, and was also put into use as a hæmostatic. Tar was highly praised for its antiseptic virtues, and was either applied in the form of a dressing or directly poured upon the wound. Besides these, many aromatics and bitters were in daily usage, among which were thyme, rosin, asphaltum, etc., used as dressings, or in the form of plasters. Galen was acquainted with catgut, and advised the use of non-putrefying substances for sutures. Prof. Anagnostakis declares that all this was not empiricism, but an antiseptic method founded upon some knowledge of the principles governing the healing of wounds.—*Druggists' Circular.*

PRACTICAL NOTES.

HYPOGASTRIC PUNCTURE OF THE BLADDER.

Dr. Deneffe (*Journal de Médecine de Paris*) says that too serious a view is taken of hypogastric puncture of the bladder in cases of retention. It ought not to be considered as dangerous, and as a last resource. He quotes a case of hypertrophied prostate which prevented micturition and catheterism, in which the patient was punctured seventeen times without suffering any inconvenience. The seventeenth time, the trocar was allowed to remain, and ten days afterward micturition took place spontaneously through the urethra. Nevertheless, the trocar was allowed to remain twenty-nine days, when it was removed. The fistula was closed in four days, and the patient recovered permanently.

Hypogastric puncture is considered a mild operation by Dr. Deneffe, and he states that he has performed the operation on three hundred and one patients, with a mortality of only two and a half per cent. A patient suffering from enlarged prostate or stricture suddenly cannot micturate, and this is usually due to a sudden spasm of the posterior portion of the urethra being superadded to the original lesion. Catheterism is not adapted to reduce a spasmodic contraction, and the urethra affected by spasm can only be benefited by the contact of irritating urine being removed.—*Medical Record.*

THE EFFECT OF ICED TEA.

Dr. G. W. Bar writes, in the *Therapeutic Gazette*, that iced tea has none of the physiological action of theine if it is kept ice-cold for a short time. He says that he has known a man of nervous temperament, who is kept awake all night by a single cup of tea, to drink a half-gallon of iced tea during the evening and sleep soundly at his usual time of retiring. Others, made very "nervous" by hot tea, have been able to drink large quantities of iced tea with no appreciable effect. If the tea-grounds are allowed to remain in the liquid, the iced tea is usually kept long enough before drinking to dissolve more tannin than is usual in hot tea; hence the tea should be strained as soon as removed from the fire.

COCAINE IN THE PTYALISM OF PREGNANCY.

Carlson, in *The Clinique* says: A young and very fleshy woman who was pregnant for the first time suffered extremely and became rapidly emaciated. She had the worst form of ptyalism with incessant running from the mouth, obliging her to have a spittoon by her bed or couch all the time. She also had a very distressing nausea, but with little vomiting. She was highly scrofulous, and had formerly had some eruption about the anus, under the arms, on the eyelids, and on the neck, for which she had received treatment from a physician previous to her marriage. Beside the usual treatment I tried the effect of local cauterization of the uterine cervix with carbolic acid, which old expedient has benefited some of my cases very decidedly, but it did nothing for her. I then gave three hypodermics of five drops each of the five per cent. solution of cocaine at intervals of three days, keeping her quietly in bed meanwhile. The relief was direct and complete, and, although still very weak, she got up and went about without any further trouble. She was safely delivered of a nice boy on the 16th day of July.—*Times and Register.*

A REMEDY FOR TENDER FEET.

A remedy for tender feet is cold water—about two quarts, two tablespoonfuls of ammonia, one tablespoonful of bay rum. Sit with the feet emersed for ten minutes, gently throwing the water over the limbs upward to the knee. Then rub dry with a crash towel, and all the tired feeling is gone. This is good for a sponge bath also.

PHENACETINE IN TYPHOID FEVER.

I have just discharged my third case of typhoid fever with phenacetine treatment. Duration of each case, twenty-one days. All the drugs used was an opening dose of calomel, and then gave phenacetine, 3 grains, and sulphate of quinine, ½ grain, every four hours, to a boy eleven years old. The skin was moist throughout. To adults I give 8 grains of phenacetine, with 1 grain of quinine. It kept the temperature below 101° eight hours.—W. S. Cline, *Medical World.*

FOR IRRITABLE BLADDER.

Dr. W. P. Chunn writes to the *Maryland Medical Journal* that the following prescription has been found to allay incessant desire to urinate, and irritable bladder when due to phosphatic deposits in the urine:

℞. Acidi benzoici, ʒ ij.
Sodii boratis, ʒ iij.
Aquæ, f ʒ xij.
℥. Sig. Tablespoonful three times a day.

This mixture has upon two occasions acted so efficiently in what was thought to be cystitis that cystotomy was dispensed with.—*N. E. Medical Monthly.*

NITRATE OF COCAINE IN THE TREATMENT OF URETHRAL DISEASES.

Lavaux thinks that the nitrate of cocaine should replace the hydrochlorate as a urethral anæsthetic, previous to the application of nitrate of silver. The nitrate may be prepared by pouring a solution of the hydrochlorate into a solution of nitrate silver. An absolute-precipitate of chloride of silver falls, and nitrate of cocaine remains in solution.

SOCIETY PROCEEDINGS.

Allegheny County Medical Society.

Special Meeting, August 19, 1890.

W. S. FOSTER, M.D., PRESIDENT IN THE CHAIR.

EXHIBITION OF SOME URETHRAL INSTRUMENTS.

DR. STEWART: The first instrument is the urethragraph. A year ago last July I exhibited my first urethragraph. I have made a number of changes. This instrument is for the purpose of recording a diagram of the urethra, giving the exact circumference at every point. The next instrument I will show you resembles the first one. It is almost the same in principle. It is for a different purpose; it is a combined urethrameter and urethratome, so made that it will either measure the urethra or cut a stricture. This instrument is inserted into the urethra as far as you may desire, usually to the bulbous portion. If you desire to cut a stricture, you first ascertain the size of the healthy portion of the urethra, the part you do not wish to cut, then permit the blades to open to the size you desire to cut. Having done this, fasten the screw on the upper surface and withdraw the instrument. The third instrument is the urethrascope, the fourth an urethral syringe.

DR. THOMAS: I have had no experience with the doctor's instruments. I did have a little experience in the doctor's presence with his first urethragraph. At the time it was not perfected, so that my experience will not serve in my remarks at present. The principle of the instrument is doubtless correct. I have been using the urethrameter of Professor Otis, which I have considered the best in the market. The difficulty I found was this: that you had to cover the instrument with a gum tube, the gum tube always giving more or less resistance. After passing the urethrameter down as far as it would go to the bulbous portion, and then opening its arms to the full calibre of the urethra, then in withdrawing it when you would come to a stricture, of course the instrument would cease. Then in order to pass through the stricture, you had to reduce the calibre until it would cut through the stricture, but in bringing it through the stricture you could not tell where the stricture ended. You might pull your instrument anterior to the stricture. Now, that is the trouble with the Otis urethrameter. In the doctor's urethrameter, if the spring has the proper sensibility to come and go with the inequalities of the urethra, then it is a typical instrument. But the question is to me whether you can get a spring sufficiently graduated to come and go as you withdraw the instrument.

DR. STEWART: As Dr. Thomas has suggested, the spring in the instrument we used together was weak; this has been remedied.

DR. WERDER reported:

FIVE LAPAROTOMIES.

Case 1. Intra-ligamentous Cyst.—Aged 22 years; epileptic; typhoid fever in October last, followed by bad health. Noticed a tumor growing since, reaching from one to one and one-half inches above the umbilicus down into the vagina, bulging out Douglas' *cul-de-sac* and pushing down the anterior wall of the rectum, in fact almost completely filling out the pelvic cavity. The tumor was immovable, fluctuating and distinctly pulsating both over the abdomen and in the vagina, suggesting the possibility of an aneurism. Exploratory laparotomy, March 29, exposed an intra-ligamentous cyst, which had to be peeled out of its capsule. It was a tedious and difficult task. Drainage. Patient made an excellent recovery, without rise of temperature and notable increase of pulse-rate. Had an epileptic attack immediately after operation, then none for a week, though previous to operation she had a number of them every day. After first week they returned at intervals of several days.

Case 2. Pyosalpynx.—Miss M. D., 26 years of age, had poor health for several years; about a year ago she was obliged to go to bed, when an abscess ruptured into her rectum, which continued to discharge for several months. After the discharge had ceased, her health improved and she gained flesh, but six weeks later she experienced great pain in her right side, and when she entered the Mercy Hospital another abscess had ruptured into the vagina. She was extremely emaciated and anæmic. Laparotomy performed April 6. The anæsthetic used was the "mixture." Immediately after opening the peritoneal cavity she became asphyxiated. Respiration and pulse were arrested for fully five minutes; artificial respiration was performed, head and chest lowered, and hypodermics of whisky administered. Probably ten to fifteen minutes passed until the respiration and pulse became normal and the operation could be continued. On introducing my hand into the pelvis, I found one large mass from which neither uterus, ovaries or tubes could be distinguished. After a great deal of trouble I succeeded in freeing the right tube and ovary from their adhesions; both contained pus-cavities. The left tube was also removed with the greatest difficulty; its ovary, however, could not be found. A drainage tube was inserted. Twenty-six hours after the operation a fæcal odor was detected in the discharge from the drainage tube. The following day she commenced to discharge fecal matter in large quantities, and from now on most of her fæces passed through the tube and on the sides of it, continuing to do so for a week. The wound was kept clean by enemata, which were

immediately returned through the fistulous opening. During this time her appetite was poor, and vomiting very frequent, so that she became exceedingly weak. The fistula gradually closed up, so that at the time of her discharge from the hospital, there was only (sometimes at intervals of several days) a slight discharge of flatus. The occurrence of this fæcal fistula can easily be explained by the fact that the left tube distended with pus had become adherent to the rectum and discharged its contents through the latter. In separating this tube from its old adhesions to the rectum, the old rectal fistula of necessity was reopened, and as a consequence, by virtue of the life-saving drainage tube, the fæcal matter found its way through the external wound.

Case 3. Pyosalpynx.—Mrs. A., three years married, aged 30 years, had one child at eight months, and was never in good health since. Had three attacks of pelvic peritonitis since; with the last one she was brought into the Mercy Hospital. A very tender mass could be felt on both sides of her uterus, which was diagnosed as a double pyosalpynx. Laparotomy, April 29. Tubes and ovaries on both sides very firmly bound down to the pelvic floor and adherent to loops of intestines. They were brought up with considerable difficulty and tied off. Ovaries on both sides were firmly attached to their corresponding tubes, each ovary and tube forming one abscess-sac. Drainage. Patient rallied badly from the operation, and vomited incessantly. She had taken ether very badly, a very large quantity being needed to keep her relaxed. The incessant vomiting was therefore attributed to the ether. It kept up for forty-eight hours; for thirty hours her pulse was about 160 and very feeble; had Cheyne-Stokes respiration and an ashy color about her face. She was fed and stimulated freely by rectum, and forty-eight hours after operation she was much improved, her convalescence being then uninterrupted by elevation of temperature and with a good pulse; appetite was good, and she was sitting up in bed, when on the evening of the twelfth day a sudden change came over her; she complained of pain about the chest and of loss of appetite. Had shown symptoms of hysteria a day or two previous to this. I examined her carefully; her pulse was 100; temperature perfectly normal; abdomen flat without the slightest tenderness. She rested well during the early part of the night, but towards morning she became very restless, and died suddenly at 6 A.M. on the thirteenth day after the operation. A *post-mortem* examination could not be obtained. Her death was entirely unexpected and its cause very obscure, though I have reasons to suspect pulmonary embolism.

Case 4. Solid Tumor of Right Ovary and Ascites.—Mrs. S., æt. 45, no children, consulted me about an abdominal tumor, situated on right side of uterus, hard, irregular, freely movable, and reaching midway between the anterior superior spinous process of the ilium and the umbilicus. Lately she had suffered so much pain, that she had to be kept under the influence of opiates constantly. The diagnosis was either solid tumor of right ovary or subperitoneal fibroid of uterus with long pedicle. Laparotomy, May 6. On opening abdomen a considerable quantity of ascitic fluid escaped. The operation was extremely simple, as there were no adhesions whatsoever. Patient made an uninterrupted recovery, the temperature never being above normal. The tumor, of the size of a large cocoa-nut, had become partly cystic and appears to be a fibroid of the right ovary.

Case 5. Abscess of Left Ovary.—Miss Annie C., æt. 24, has been in bad health for over a year. I was called to see her about a year ago, and found a large mass to the left of her uterus, not very tender to the touch, and fluctuating. She was greatly reduced in flesh and very weak. Under treatment her general condition improved, but her local trouble remained the same, though local treatment was conscientiously employed for four months. I then advised laparotomy following my diagnosis of left pyosalpinx, but the operation was refused. She then placed herself under the care of another physician. Two or three months later, while going to her physician's office, on getting off the street car, an abscess ruptured through her vagina, and this was followed by a severe attack of pelvic peritonitis. At this time I was again called in, and found the mass on her left side considerably larger and exceedingly tender. She was now very anxious to have the operation performed. Laparotomy, June 16. Removed a large ovarian abscess containing about a pint of pus. The sac was adherent to the omentum, intestines, anterior surface of bladder, and had to be peeled out; on doing this, the tube, firmly attached to it and to the pelvic floor, was broken off; the remaining portion was then brought up with great difficulty. The ovary was one large abscess cavity, and the tube also contained pus. The right tube and ovary were, contrary to the usual rule, not removed, as the patient's condition was such as to make it dangerous to perform a second operation on her, especially as they seemed perfectly healthy. In breaking up the adhesions around the abscess-sac I accidentally ruptured it, and the pus poured freely into the abdominal cavity. This was thoroughly and repeatedly washed out with hot water and a drainage tube introduced. Her recovery was uninterrupted, the temperature and pulse remaining perfectly normal, except on the day after the operation, when the temperature rose to 100°. She is now in perfect health and has gained much in flesh.

DR. MACFARLANE: It is gratifying to see so many patients relieved of tumors who do well. I

do not say that it occurs in the hands of all operators, but very frequently the patient is left in a condition nearly as bad as that in which she was prior to the operation, the only effect being to prolong life for a time.

DR. WERDER: I will simply state that it is very unfortunate when the patient is left in the condition spoken of by Dr. MacFarlane. It is very important, in performing a laparotomy, not to make your abdominal incision larger than is necessary. A small incision only is needed, not more than 3 inches. Now, if this is united very carefully, and the stitches put in at proper intervals, I think herniæ will not occur very often, though they cannot always be prevented. In regard to fistulæ, those are things that will often occur from septic ligatures. If you have not your ligatures absolutely aseptic, it is very likely that a fistula will follow, but with perfectly aseptic material, it should be a very rare occurrence to have a fistula.

CASE OF TYPHOID FEVER.

DR. KEARNS: A boy twelve years old, in the third week, ceased to speak even in monosyllables, and this condition continued for about ten days. During this time there was no apparent impairment of intellect. Sitting at the bedside of the patient and telling him to put out his tongue, he did it instantly. Telling him to look toward me that I might examine his eyes, he did it instantly. The pupils of his eyes were markedly dilated. Then, at the expiration of these ten days, the case assumed the very opposite condition and became loquacious; he would take up any conversation which occurred in the room and follow it up repeatedly. This condition continued day and night with some short intervals of rest for ten days, when it gradually stopped. The pulse was accelerated during this period of excitation. It was at a normal stage during the period of quietude. All this time the stomach had been in good condition. Now here are two extremes. What condition of the brain and nervous system is involved in these conditions of two extremes in the same patient and the same disease? This cerebral excitation was very difficult to control. The simple remedy which appeared to have the desired effect was calomel. I administered a grain ¼ of calomel every two hours, then when the bowels began to run off, in smaller doses. To me this was a very interesting case, and I ascribe the nervous symptoms to a complicating meningitis.

DR. THOMAS: During the month of April, I saw a patient with typhoid fever. The boy was thirteen years old. He had been sick about a week. The fever ran an ordinary course. About the twenty-first day there was defervescence, and I presumed the case was going on the convalescence. I visited the boy as long as I remained in the city, and in the meantime he would not speak a word until the day before I went away, I got him to say one word. I did not feel uneasy about him, his temperature not being above normal. He went into the hands of Dr. McNeil. On my return I found the boy all right, and was told that in speaking to his grandmother, in whose care he was, upon his beginning to talk again, the first word he said was "cracker." He said: "Cracker, cracker, cracker," for three or four minutes; then he ceased calling for crackers. I looked upon it as caused by anæmia of the brain.

DR. STEWART: I remember a case where a man lost the power of the right arm. The loss was progressive, and then he had convulsions. The convulsions were in the arm affected. Subsequently they became general and he would become unconscious. The convulsions became very frequent, several times a day. An operation was performed under the supposition of lesion in that area. The man had had syphilis. Iodide of potassium had no effect on the case. The brain was uncovered and only a localized meningitis was found. Incisions were made into the brain and nothing was found. The man ultimately recovered the use of his arm and had no more convulsions.

DR. MCKENNAN: I find that it is not at all uncommon to have peculiar mental states following typhoid fever; mental weakness and also very frequently mental exhilaration. I have seen many cases of insanity which have been traced to typhoid fever. I have never seen a case of meningitis in a child with typhoid fever. The whole weight of authority goes toward the supposition that the lesion is purely of a functional character and that there is rarely any structural lesion, although some authorities state the possibility that there may be embolism which could only involve one artery.

DR. LANGE: No matter what cerebral symptoms we may have in typhoid fever, there is no justification for the assumption of meningitis. No matter how violent or how peculiar are the cerebral symptoms, the assumption of meningitis is not correct, is not justified. I do not know that typhoid fever and meningitis are incompatible, but I mean to say that *post-mortem* examinations in cases of typhoid fever which presented most violent and most strange ataxic symptoms have so invariably proven the absence of meningitis and of all inflammation, that such symptoms cannot be correctly assigned to meningitis or to any structural lesion, but are to be considered only as the toxic effects of the typhoid fever poison. Neither can I understand how the speech center can be affected by a meningitis without previous and greater injury to the motor areas, which being in closer opposition to the meninges than the centre of speech, would primarily, and to a greater extent, be subjected to meningeal pressure.

DOMESTIC CORRESPONDENCE.

LETTER FROM NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Summer Homes and Hospitals for the Poor—What the St. John's Guild is Doing to Help the Movement—The Children's Aid Society—Health Resorts in New York State—Miscellaneous Gleanings.

The movement for enabling the poor of the city to enjoy the benefits of fresh air in the summer, which was inaugurated less than twenty years ago, has now extended to enormous proportions and ramified in many directions. Originally started to relieve the children in the crowded tenement districts during the heated term—by day excursions—it has been extended by the establishment of a large number of summer homes and hospitals, at the seaside and in the country, which are fitted up with the best sanitary appointments, and where the children, both sick and well, are often kept for weeks at a time. Besides this, many children are annually cared for in the country, free of expense, by farmers and others who take them into their homes, and the fresh air fund work has further been extended by various churches and societies; so that, while a vast number are thus reached through charity, summer resorts have also been provided where those of moderate means, especially young working girls and women of refined tastes, may secure a summer outing at a very low cost.

For many years one of the most prominent organizations in this fresh air work has been the St. John's Guild, to which Dr. Charles A. Leale, Dr. William Thurman and others have unselfishly devoted much time and thoughtful attention. The Guild owns a large seaside hospital at New Dorp, Staten Island, and a floating hospital which makes salt water excursions, loaded with women and children four times a week during the summer season. Free admittance to these excursions is given to poor sick children and their mothers, the tickets for which can be had at all the dispensaries and from the physicians of the summer corps of the Board of Health. A warm dinner is served on board, and there is an abundant supply of fresh milk for the children. Besides, free baths are furnished to as many children as can be accommodated in the bathing department. Of course, no cases of contagious disease are admitted, and a physician is always at the dock to examine each child that is brought to the boat. The less serious cases stay on the upper deck. The more serious ones are kept on the lower deck, and they have the privilege of going to the seaside hospital for such a length of time as the circumstances of each require.

When the floating hospital reaches the lower bay, it is moored amidstream opposite the seaside hospital, and the number of flags displayed on the flagstaff of the latter indicates to those on board how many vacant beds there are and how many women and children can be accommodated. The seaside hospital has two pavilions, with a central executive building, and the wards extend the entire length of the pavilions. A staff of two physicians and three trained nurses are in constant attendance. A pleasant beach is near the hospital, and the patients have the benefit of sea bathing, as well as sea air.

Last year 30,057 sick children and mothers were carried on the floating hospital on free fresh air excursions. Thirty-three trips were made from July 9 to September 6, 2,056 salt water baths were given on board under medical supervision, and the cost *per diem* for maintenance of the hospital was 21¼ cents *per capita*. Each trip of the barge involves an aggregate cost of about $250, and the trips are made alternately from the east and the west sides of the city. At the seaside hospital 1,013 sick children and 500 weary or invalid mothers were admitted to the wards, and after being well fed and cared for for a suitable period, were generally returned to their homes with restored health and vigor. In twenty-three years St. John's Guild has sent out 398,915 children and mothers on its excursions.

A very large work in this guild is done by the Children's Aid Society, which conducts a Health Home at West Coney Island, and a Summer Home at Bath, Long Island. The Health Home has pleasant cottages and dormitories for the reception of mothers with children under five years of age, where a week's stay is allowed. Each week a party of from 60 to 100 mothers and sick infants are taken to the Home, and last week there were cared for at it 1,838 children and 1,048 mothers for a week, and 2,955 women and children who remained for from one to three days. The Summer Home at Bath was bought several years ago by Mr. A. B. Stone, for $20,000. Each week during the summer parties of from 250 to 300 little children from the tenement districts are taken down there to enjoy its rest, comforts and pleasures. There are also day picnics from time to time at this Home.

The subject of fresh air is suggestive of health resorts in general, and New York State is especially fortunate in having within its borders, and readily accessible from the large cities, so admirable a mountain sanitarium as the Adirondack Forest region. No one has done so much to call public attention to the peculiar virtues of the Adirondacks from this point of view as Dr. Alfred L. Loomis, who a number of years ago was himself cured of serious pulmonary disease by a residence of some months among them. Within the last few years it has been conclusively demonstrated that many persons in the incipient stage of phthisis, for whom medical science could

do very little elsewhere, might, by a longer or shorter sojourn in that region, pretty certainly have the progress of the disease checked, and in a considerable percentage of cases be entirely restored to health. The Adirondacks are accordingly now recognized by the profession and the public in general as possessing curative properties for consumptives to be found in but few other places in the world. In the United States a portion of Colorado and the mountain region of Asheville, North Carolina, are apparently the only ones having such properties in anything like so high a degree.

The chief of these is fresh air, and the character of the Adirondack region seems admirably adapted to secure this. It contains a vast elevated plateau with rolling surface, which secures perfect drainage and freedom from miasmatic poison. The soil over a large portion of the country is light and sandy, and, by quickly absorbing excessive moisture, helps to secure a dry atmosphere. There are many miles of unbroken forest, largely of pine, balsam and other evergreen trees, from which the air comes not only purified, but laden with resinous aromas which are themselves powerfully disinfectant and antiseptic. The results of these and other favorable conditions have been found by actual test to be so satisfactory that a constantly increasing multitude of invalids now resort thither, while a considerable number of individuals, finding that they cannot enjoy health elsewhere, have made this region their permanent home. Rigorous as is the climate in winter, it has been found that with the clear, dry, bracing air of the cold months, the advantage to consumptives of residence there are even greater at that season than in the summer.

Many of the general considerations that influence the minds of those seeking a health resort appear to favor the Adirondacks. A change in air and surroundings is often deemed necessary, and almost any change that is not decidedly for the worse is apt to prove advantageous to the debilitated. A change merely for the sake of change is thoroughly defensible; but the Adirondacks fortunately afford not only a change from the ordinary life in the city and country, but a decided change for the better. There are new scenes, new surroundings, and new, pure air, with a perfectly healthful general environment. As compared with a city life, there is quiet instead of noise, and leisure instead of hurry and bustle. All cause for the high nervous tension maintained in the teeming centres of business disappear; so that the visitor drops out of one kind of world and finds himself in another of an entirely different sort. There is complete change and a chance for complete rest. But rest is not always found in idleness, and the surroundings met with do much to furnish means of occupation and recreation. There is the most picturesque scenery with exquisite walks and exhilarating mountain climbing. Beautiful lakes and streams abound for boating, and in the winter one has plenty of sleighing and skating. For those inclined to sports there are hunting and fishing, with abundance of game and fish in their season. Finally, there is camping, which is such a prominent feature of Adirondack life, and is universally recognized as most efficacious in the renovation of worn-out humanity. Consumption, being peculiarly a disease of civilization, is nourished by bad air and over-work amid insalubrious conditions, and a recurrence under favoring conditions to some of the features of aboriginal life, therefore, appears to be often the best possible treatment for it. But if the Adirondacks are unequalled as a health resort for actual invalids, they are also equally valuable to those who need not to be cured, but only invigorated or carried over a hot month.

The most noted health resort in the Adirondacks is the village of Saranac Lake, which is rapidly growing in importance and in popular favor, and for the past two years has been the terminus of the Chateaugay Railway, which affords as yet the only means of reaching the heart of the Adirondack region by rail. It is beautifully located amidst the most charming scenery, and its situation and the hygienic conditions existing there are believed to be especially favorable. It has a large population in the winter as well as the summer, and, in addition to numerous boarding-houses and private cottages, a large, first-class hotel, fitted up with all the modern luxuries, is now kept open all the year round. The fact that so many persons with pulmonary trouble are here seeking relief has caused them to be recognized as a distinct class. In the slang of the town they are known as "lungers," but as it is upon the money which they spend that the prosperity of the place in a great measure depends, they are naturally treated with the utmost respect.

An institution at Saranac which is accomplishing much good and is meeting with constantly increasing appreciation and encouragement, is the sanitarium for consumptives founded a few years ago by Dr. Edward L. Trudeau, formerly of New York, who, in consequence of suffering from phthisis himself, removed to the Adirondacks. Having become permanently cured, he has since continued to reside there, and, being an ardent student of the pathology and treatment of the disease, he has devoted himself largely to original research, and from time to time has added contributions of substantial value to our knowledge of this subject. With very limited financial means at his command, he commenced the work of the sanitarium in a very small way, and for a time it had a hard struggle for existence. He lost no opportunity, however, in interesting people with whom he came in contact in the institution, and

gifts began to come in. The contributions from well-to-do visitors to the Adirondacks now amount to a good many thousand dollars, and several separate cottages have been built, each by the gift of a single individual. Two such cottages are now in course of erection; one of them being given by the wife of Dr. Loomis. Mrs. A. P. Stokes, of New York, has also proved a generous friend to the sanitarium, and a pavilion is now in process of erection at her expense which is to be especially devoted to the recreation of the inmates, being fitted up with billiard tables, and other appliances for amusement, and provided with ample piazzas, which can be inclosed with glass in cold or stormy weather. The various contributions have not only increased the capacity of the sanitarium, but have also provided free beds for those unable to pay the regular charge of $5 a week. The generous spirit shown of late has made it pretty certain that the sanitarium will be permanent, and in fact, the hope is now entertained that an endowment fund large enough to pay the necessary expenses will soon be secured.

The institution has never paid but one salary, and that is to the matron, who acts as general superintendent. Until the past year it has not had a resident physician. For a considerable time Dr. Trudeau was the only attending physician, but more recently he has been efficiently aided in this work by Dr. C. F. Wicker. The sanitarium now has about fifty inmates, and it is not only full, but has a list of names on hand of applicants who desire to enter as soon as there is room for them. As it was established "for the cure of pulmonary diseases," and to aid those of insufficient means, admissions are naturally restricted as far as possible to hopeful cases and to persons unable to pay all their own expenses. The history of most cases of consumption, it is believed, shows that there is a time when restoration to health might take place if the patient could for a while give up his occupation and care, and obtain a change of climate and surroundings. It is, accordingly, the intention to restrict admissions to persons in the incipient stage of phthisis; but such intention is not easily carried out, and certain cases of a different character are sometimes admitted. Some of the results met with in the institution may be judged from the following extract of the last annual report:

"From February 1 to November 1, 96 patients have been treated. Of these, 1 died in the institution, 11 continued to lose ground and returned to their homes, 17 have temporarily improved, while in 17 the disease was arrested, and they were sufficiently restored to resume their occupations, and 8 have been cured. The remaining 42 are still under treatment."

One of the chief features of the treatment is, of course, the keeping of the patients in the open air, and making sure that they shall have perfectly pure air when indoors. To this end the ventilation of the cottages is carried to the utmost degree of completeness. Patients are required to be outdoors several hours every day, winter and summer, and opportunities are afforded for riding, as well as for walking and other exercise. The sanitarium is picturesquely situated on a hillside overlooking the Saranac River, and having an elevation of 2,000 feet above sea level, the air is dry nearly all the time. It is said that not more than four or five times a year is any deposit of moisture found on the cottage piazzas in the morning. The cottages, which are tastefully constructed, are all small; accommodating only from two to five persons each.

The great natural advantages which the Adirondacks afford as a health resort and breathing-place for the people, which are now becoming so generally appreciated, render it imperative that they should be supplemented by all that art can do to make them permanent and accessible. Already the vandalism of lumbermen, charcoal burners, and railroad projectors has laid waste vast districts of noble forest; and not only should these forests be preserved, but every step taken toward opening roads and settlements should be under capable supervision. The best intelligence and skill that the State can command should certainly be employed to make this great natural State park a park indeed, the attractiveness and usefulness of which should be increased, rather than diminished, as time goes on.

The last monthly bulletin of the State Board of Health announces that 11,083 deaths were reported in the State during the month of July. According to the bulletin, July has uniformly the largest death-rate of any month in the year. The average number of reported deaths per month for the past five years has been 7,866, while that of July has been 10,252. The infant mortality is also highest in July, more than half of the deaths being of children under 5 years of age, the average of the rest of the year being about one-third. For July of this year the infant mortality is a little below the average, but is much higher than in June. Of the total number of deaths, 4,254 occurred in New York City, and 2,219 in Brooklyn. The deaths under 5 years were 2,609 in the former, and 1,384 in the latter.

A Chinese laundryman, of Hoboken, having consulted a physician of his own nationality for some abdominal trouble, the exact nature of which is not now of importance, was informed that it would be necessary for him to undergo an operation by a "Melican doctor." Under these circumstances the patient considered life no longer worth living, and, rather than submit to the surgical procedure, he made his will, set his house in order, and quietly threw himself into the Hudson River, whence his body was fished out a few days afterward. P. B. P.

MISCELLANY.

HEALTH IN MICHIGAN.—For the month of August, 1890, compared with the preceding month, the reports indicate that dysentery, typho-malarial fever, typhoid fever, cholera infantum, and cholera morbus, increased, and measles, puerperal fever, whooping-cough, and cerebro-spinal meningitis decreased in prevalence.

Compared with the preceding month the temperature was lower, the absolute humidity was less, the relative humidity was slightly more, the day ozone and the night ozone were less.

Compared with the average for the month of August, in the four years 1886–1889, scarlet fever and influenza were more prevalent, and puerperal fever, whooping-cough, typho-malarial fever, erysipelas and cerebro-spinal meningitis were less prevalent in August, 1890.

For the month of August, 1890, compared with the average of corresponding months in the four years 1886–1889, the temperature was lower, the absolute humidity was less, the relative humidity was about the same, the day ozone was slightly less and the night ozone was slightly more.

Including reports by regular observers and others, diphtheria was reported present in Michigan, in the month of August, 1890, at 49 places, scarlet fever at 48 places, typhoid fever at 61 places, and measles at 24 places.

Reports from all sources show diphtheria reported at 1 place less, scarlet fever at 7 places less, typhoid fever at 32 places more, and measles at 48 places less in the month of August, 1890, than in the preceding month.

LETTERS RECEIVED.

Dr. J. Adelphi Gottlieb, Dr. John A. Cutter, W. H. Schieffelin & Co., Dr. R. Eliot, New York City; Dr. J. M. Wilson, "Spring Valley Farm," Ky.; Dr. A. O. Gilman, St. Cloud, Minn.; Dr. A. W. Sydney, Fitchburgh, Mass.; Dr. J. H. Van Eman, Kansas City, Mo.; Dr J. B. Mattison, Brooklyn, N. Y.; Dr. W. F. Rochelle, Jackson, Tenn.; Sultan Drug Co., St. Louis, Mo.; Dr. W. L. Worcester, Little Rock, Ark.; C. L. Topliff, New York City; Dr. R. W. Davis, Saginaw, Mich.; James O'Gorman, Baltimore, Md.; Mt. Carmel Hospital, Columbus, O.; Dr. P. H. Reilly, Mineral Point, Wis.; Katharmon Chemical Co., St. Louis, Mo.; Dr. T. D. Crothers, Hartford, Conn.; Dr. Marie B. Werner, Philadelphia; Dr. A. W. Brayton, Indianapolis; Canton Surgical and Dental Chair Co., Canton, O.; Dr. J. L. Hillmantel, Missoula, Montana; Dr. T. G. Horn, Colorado Springs, Col.; M. A. Spencer & Co., Cincinnati, O.; Dr. C. F. Ullrich, Wheeling, W. Va.; Dr. R. L. Thompson, Spokane Falls, Wash.; Jno. R. Barrett & Co., Subscription News Co., Chicago; Tanner's National Bank, Catskill, N. Y.; Bowden Lithia Spring Co., Lithia Springs, Ga.; Dr. R. R. Walker, Austin, Texas; Dr. L. R. Culbertson, Zanesville, O.; Dr. L. W. Weedon, Tampa, Fla.; Dr. D. F. Randolph, Waldron, Ind.; Dr. T. D. Spencer, Rochester, N. Y.; Dr. J. W. Terry, Englewood, N. J.; Mt. Vernon Sanitarium, Mount Vernon, O.; Dr. Jennie S. Godfrey, Dr. Wm. J. Ennis, Washington, D. C.; W. P. Cleary, M. H. Peet, N. Y. City; L. Dell, Dr. A. R. Small, Chicago; Dr. J. F. Jenkins, Tecumseh, Mich.; A. A. Marks, J. H. Bates, N. Y. City; Plimpton Mfg. Co., Hartford, Conn.; Dr. Guido Bell, Indianapolis, Ind.; Dr. R. R. Fletcher, St. Paul, Neb.; Dr. I. S. Stone, Lincoln, Va.; Dr. R. R. Thompson, Mabel, Minn.; Dr. R. M. Wigginton, Waukesha, Wis.; Dr. R. A. Gunn, N. Y. City; Dr. Albert B. Prescott, Ann Arbor, Mich.; W. Pa. Medical College, Pittsburgh, Pa.; Dr. W. S. Caldwell, Berlin; P. Blakiston & Co., Philadelphia; Dr. C. Plá, Cuba; Dr. H. S. Johnson, Lawrenceville, N. J.; Dr. W. K. Sutherlin, Mansfield, La.; Dr. R. W. Miller, Los Angeles, Cal.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from September 4, 1890, to September 12, 1890.

By direction of the Acting Secretary of War, First Lieut. Nathan S. Jarvis, Asst. Surgeon, is relieved from duty at Ft. Verde, Ariz. Ter., and will report in person to the commanding officer, San Carlos, Ariz., for duty at that station. Par. 4, S. O. 208, A. G. O., Washington, September 5, 1890.

Major A. A. Woodhull, Surgeon, is granted leave of absence for one month, on surgeon's certificate of disability, with permission to go beyond the limits of the department. Par. 1, S. O. 122, Hdqrs. Dept. of the Missouri, St. Louis, Mo., September 5, 1890.

First Lieut. Leonard Wood, Asst. Surgeon, is hereby granted leave of absence for one month, to take effect on or about October 20, 1890, with permission to apply for an extension of one month. Par. 1, S. O. 74, Dept. of California, San Francisco, Cal., August 30, 1890.

Capt. Edward C. Cutter, Asst. Surgeon U. S. A., is granted leave of absence for one month. Par. 2, S. O. 108, Hdqrs. Dept. of the Columbia, September 6, 1890.

Official List of Changes in the Medical Corps of the U. S. Navy for the Week Ending September 13, 1890.

Medical Director Theoron Woolverton, ordered to U. S. S. "Philadelphia" September 15.

Medical Inspector Thomas N. Penrose, detached from the U. S. S. "Richmond."

P. A. Surgeon J. E. Gardner, detached from the U. S. F. C. Str. "Albatross."

P. A. Surgeon N. H. Drake, detached from the U. S. C. S. Str. "McArthur," and to the U. S. F. C. Str. "Albatross."

P. A. Surgeon T. A. Berryhill, detached from the hospital, Mare Island, Cal., and to the U. S. C. S. Str. "McArthur."

P. A. Surgeon A. C. Heffinger, ordered before Retiring Board October 1, 1890.

Official List of Changes of Stations and Duties of Medical Officers of the U. S. Marine-Hospital Service, for the Three Weeks Ending September 6, 1890.

Surgeon John Vanaant, granted leave of absence for thirty days, to take effect upon return of Asst. Surgeon J. C. Perry to duty. September 5, 1890.

Surgeon Walter Wyman, to proceed to Cape Charles Quarantine Station, on special duty. August 25, 1890.

Surgeon Geo. W. Stoner, granted leave of absence for four days. August 19, 1890.

P. A. Surgeon D. A. Carmichael, leave of absence extended fifteen days. August 26, 1890.

P. A. Surgeon R. P. M. Ames, to proceed to Memphis, Tenn., on temporary duty.

P. A. Surgeon S. C. Devan, leave extended five days on account of sickness. August 12, 1890.

P. A. Surgeon L. L. Williams, granted leave of absence for thirty days. September 5, 1890.

Asst. Surgeon H. F. Goodwin, granted leave of absence for thirty days. August 21, 1890.

Asst. Surgeon J. O. Cobb, to proceed to Marine-Hospital, Detroit, Mich., for duty. August 16, 1890.

Asst. Surgeon S. H. Hussey, granted leave of absence for thirty days. August 19, 1890.

Asst. Surgeon J. C. Perry, granted leave of absence for twenty days, to take effect when relieved. September 3, 1890.

Asst. Surgeon G. B. Young, to rejoin his station at St. Louis, Mo., when relieved. September 3, 1890.

APPOINTMENT.

Asst. Surgeon Milton J. Rosenau, commissioned as an Asst. Surgeon by the President, August 25, 1890. Ordered to Chicago, Ill., for temporary duty. August 27, 1890.